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PELVIC PAINS, GYNÆCOLOGISTS AND NEUROSES.[1]

By V. J. KINSELLA, M.D. (Sydney), F.R.C.S., F.R.A.C.S., *Sydney.*

I AM very much honoured by the invitation to address this Section, and my association in this with Professor F. J. Browne and Dr. D. Ross redoubles the honour. But the responsibility of presenting something worthy is correspondingly great.

Visceral Pain Pathways.

The essential pathway for visceral pain is the simple direct one subserved by visceral afferent nerves—a pathway which, like the pains themselves, is deep-seated and has no superficial component (Figure I). Text-books of gynæcology have not recognized this. Many teach that the uterus has no pain nerves and is painful only when the disease spreads to the parametrium. Such teaching is self-contradictory. The nerves in the parametrium are distributed to the uterus, and they cannot be pain-sensitive in the parametrium and pain-insensitive in the uterus. But in the uterus they are more widely dispersed, and the stimulus must be applied to a greater bulk of tissue. This essential extensity of stimulus is provided in clinical conditions. In labour the whole uterus partakes, and in cervicitis the whole cervix.

Moreover, it can be shown experimentally that the cervix is pain-sensitive. If cervical erosions are destroyed by diathermy, with the use of an active electrode three millimetres in diameter, pain is caused. By using similar factors for the destruction of lesions in the skin, and by limiting the zone of local anæsthesia, it can be shown that the stimulus does not spread so deeply that it would pass beyond the uterus if applied to the cervix. The experiments show, not only that the cervix is pain-sensitive, but also that it has some power of lateral localization of the stimuli, and that there is a lag in perception of the change of localization. The experiments have not shown any power of antero-posterior localization (Kinsella, 1948).

Some text-books of gynæcology reject the essential sensitivity of the female pelvic viscera on the grounds that gross disease may exist there without pain. The absurdity of this reasoning is seen when it is applied to the skin, for here also gross disease can exist without pain.

A second pathway comes into play when the disease spreads to the parietal peritoneum and the body wall. Somatic pain is then added to the splanchnic pain (Figure II).

A third pain-pathway is the cerebro-spinal pathway, by which mental influences descend from the brain, to

[1] Read at the annual meeting of the Section of Obstetrics and Gynæcology of the New South Wales Branch of the British Medical Association on November 18, 1953.

centres in the spinal cord (Figure III). Text-books of gynæcology take no cognizance of this.

A fourth possible pathway is the spread of irritation in the spinal cord, from visceral to somatic afferent pathways, the most sensitive and efficient of which is that leading from the skin (Figure IV). But pains from the uterus and adnexæ are felt deep within the patient, not upon the surface, and as a rule no hyperalgesia can be demonstrated with them, if care is taken to avoid suggestion and disturbances of deeper tissues. Dr. K. A. McGarrity found cutaneous hyperalgesia in but a small minority of his patients (1953). So we must conclude that this fourth pathway is not usually trodden by gynæcological impulses.

This deepness of the pain and the absence of superficial signs show also that the pains are not segmental. Not only *the depth, but also the shape of pain distribution is inconsistent* with body segments, for it is bulky and three-dimensional rather than band-like, and the pain in the back is too low to correspond segmentally with the pain in the front. Also there is a pain gap in the lateral line

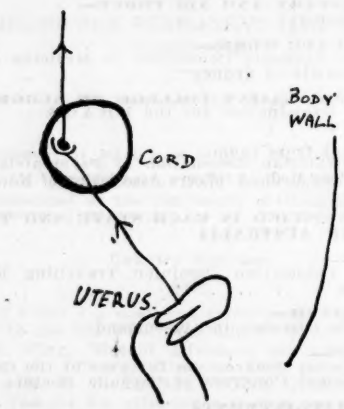

FIGURE I.

Route 1. The first of the two essential and constant pathways. (The visceral afferent neuron may, of course, belong to the thoraco-lumbar or sacral inflow.) Not yet recognized in text-books of gynæcology.

of the body, so that we are left with two pains, an anterior and a posterior, instead of one encircling pain as in uretero-renal disease. Nor do we find with utero-ovarian pain any striking somatic disturbance such as the shoulder-hand syndrome in cardiac disease, in which not only pain but also a crippling fibrosis affects the somatic parts.

The pain of cervicitis, the pain of labour in its first stage, and the retro-umbilical (not umbilical) pain of appendicitis, are pure visceral pains, deep-seated, ill-localized, and with no somatic component. They have nothing to do with body segmentation and dermatomes. The effort to link them with body segments and dermatomes leads to confusion. It should be noted that the kidney and the heart are in their early stages of development in the body segments, and are segmented with them, so that we may expect segmental pains from them. But the alimentary tract and the Müllerian ducts are never segmented with the body segments. There is no reason why we should expect segmental pain from them.

Although this spread within the central nervous system is not essential for visceral pain, it is of very great interest. It is probably concerned in cutaneous hyperalgesia, in Boas's sign, in the pains and tenderness in the arm in cardiac diseases, in the causalgias, in Sudeck's arthropathy, in the shoulder-hand syndrome, in phantom-limb pain and other partly understood phenomena.

Abdominal Pain, Body Chemistry and Nerves.

In order to explain spread, self-perpetuation, convergence and summation in these conditions, an "internuncial pool" of neurons has been postulated, within which impulses may spread, and reverberate without end, as though in a circle (Figure V). *The anatomical basis for* this has been demonstrated. But the mere anatomical arrangement of these neurons does not explain why they should behave unobtrusively in health, and in disease become the site of a vicious circle of pain impulses. I *myself believe that the key to the problem lies, not only* in the anatomical arrangement of neurons, but also in disordered physico-chemistry of the fluids which lie between them, and within which they float. My reasons are as follows.

Firstly, this conception fits in well with what physiologists have discovered about the chemical transmissions of nerve impulses, and with the evidence which suggests that the peripheral stimulus for pain depends upon "P-substance".

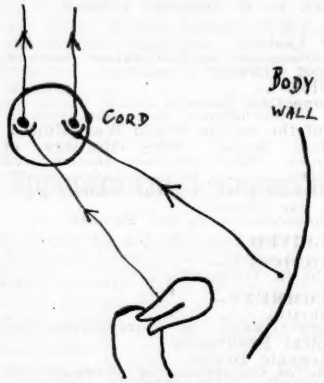

FIGURE II.

Route 2. Added, if disease spreads to the body wall.

Secondly, this conception affords some explanation of the pseudo-visceral pains and the various symptoms, often simulating the neuroses, which occur in diseases due to disorders of body chemistry. Examples of these are not lacking in gynæcology. Dysmenorrhœa may be caused or it may be relieved by hormonal factors; it may also be caused and relieved by nervous factors (Snaith and Ridley, 1948); this fact illustrates the triple association of pain, nervous system and hormones. Other examples are the neurosis-like pains of pellagra, the colics of salt-depletion, and the pains, which may even lead to laparotomy, in ketosis, in hypoglycæmia, in hypoparathyroidism, in thyrotoxicosis, in porphyria, in Addison's disease, in adreno-medullary tumours, in Cushing's syndrome and in uræmia. The shoulder-hand syndrome and its relief by cortisone also suggest chemical changes in the central nervous system. I would postulate an abnormal physico-chemical substance—an "I.F." (irritable focus") substance between the affected neurons of the internuncial pool.

Thirdly, this conception affords a possible explanation of the neuroses, which may sometimes be due to a disturbance of body chemistry rather than to a disturbance of the nervous system. Alterations in body chemistry may affect neurons, just as impulses in neurons may affect body chemistry. So far as the neuroses are concerned, it is not clear that the defect is always primarily in the nervous system, as is commonly supposed. I prefer to conceive the neuroses as sometimes a defect in body chemistry, neurohumoral rather than neural, because they so closely resemble and are so closely associated with other diseases, in which disorders of the nervous system are due to chemical disturbances. Sometimes, as in asthma, the

action is reversible in the same patient, the nervous system sometimes affecting the body chemistry and at other times the body chemistry affecting the nervous system. *Other examples are migraine, the glycosuria and* albuminuria due to injuries and to acute diseases of the nervous system, the mental hebetude of myxœdema, the asthenia of Addison's disease, the nervous irritability or even psychoses of the menopause, the emotional changes associated with some adrenal cortical tumours and some ovarian tumours, the neurasthenia of hypoglycæmia and of vitamin *B* deficiency, the apathy and lassitude of salt *depletion, the mental symptoms of pellagra.*

Another interesting group are the patients with gross *cerebral disease first presenting with abdominal symptoms.*

I heve recently examined a bookmaker with abdominal pain requiring morphine, referred for laparotomy. There were also psychotic symptoms, and autopsy revealed cerebral softening, but no disease in the abdominal viscera.

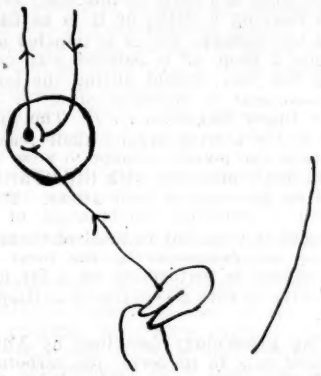

FIGURE III.

Route 3. Descending (cerebro-spinal) impulses converging on cord centre. The second of the two constant pathways. Not yet recognized in textbooks of gynæcology.

In a second patient, examined in 1953, abdominal pain had persisted for six months with loss of two stone in weight, so that carcinoma was suspected. But investigation revealed no abnormality in the abdomen. He became disoriented and non-cooperative, and the physician diagnosed cerebral vascular disease. A few months after his discharge from hospital his home physician reported his death from cerebral softening.

An interesting variant of this group are the patients with abdominal pain caused by epilepsy, sometimes revealed only by electroencephalography, and relieved by "Dolantin" therapy. Abdominal pain may also occur in thalamic disease, brain tumour, migraine and encephalitis, and from psychic shocks.

Pre-operative Neuroses.

By far the commonest cause of pseudo-visceral pain is the anxiety neurosis, very often simple and easily curable. It afflicts a large proportion of those coming to our consulting rooms. Too often they are treated by surgical operation. The organs most easily removable most often fall victim—the female pelvic organs and the appendix. Kroger and Freed (1951) quote series in which 993 ovaries were normal among 1320 removed, and in 65% of hysterectomies the uteri were normal, or their removal was not indicated, or was really contraindicated.

To illustrate a common mechanism, I will take a common example.

A patient had recently recovered from a mild first attack of acute appendicitis. She still suffered from pains and slight ill-defined tenderness, but not from any impairment of appetite or digestive functions. She came, referred for consultation, ready for operation, and expecting arrangements to be made forthwith. But when she learned that her *particular attack had been mild and that there was a* reasonable chance that she would have no more attacks (Rendle Short estimated a 50% chance), and that even if she *had another attack, she would no doubt survive, her attitude* to her disease began to change. But she still had the common anxiety (which often remains unexpressed): "Do not people *sometimes die, because the appendix bursts?" The* reply was: "Yes, but there is no need for you to fear, unless you live far from surgical aid. The stories of people just *saved in time are usually gross exaggerations, much* dramatized. The appendix does not burst without warning, like a bomb. It gives plenty of warning, and only when this *is ignored does it slowly perforate." And so on. Under such* instruction, she adopted a more reasonable attitude towards her appendix, and agreed to leave the matter for a month. *The symptoms disappeared within a few days, and she* finally agreed to forgo operation.

In one such case, encountered many years ago, the local practitioner protested: "I was always taught that when you diagnosed appendicitis, you should take out the

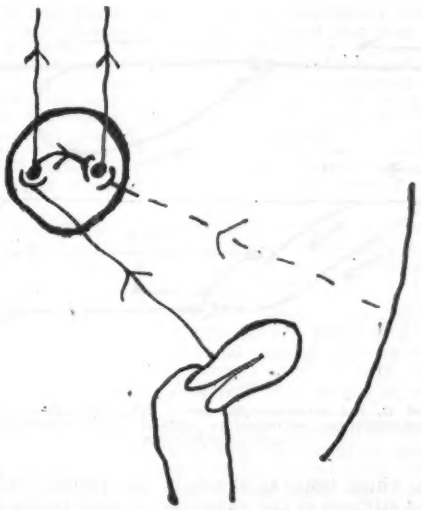

FIGURE IV.

Route 4. Spread in an irritable focus in the cord, from splanchnic to somatic pathways, perhaps with *convergence and summation of* normal impulses from body wall. Not common.

appendix." This practitioner had learned nothing about anxiety neuroses imposed upon mild organic disease, nor did he recognize the triple iatrogenic anxiety which he had needlessly inflicted upon the girl and her parents. The patient's appendix is still in place today, and she is still in good health.

The widow of a university professor recently gained admission for herself to a hospital. She had flatulence which came in bouts. At other times, she would have no indigestion for months. She was submitted to many laboratory tests, and the skiagrams had shown that the gall-bladder was large. Removal of the gall-bladder was advised. She left the hospital, and invited me to remove her gall-bladder. But an examination of the abdomen showed that the gall-bladder was not tender, and a study of the skiagrams showed that the gall-bladder, in spite of its size, emptied quite well. The patient was then asked why she went into the hospital. She went because she felt very nervous and tired, and was growing worse every year. She had lost two stone in weight since the professor had died. Moreover, her only child had gone away in pursuit of his vocation fifteen months previously. (This son suffered from convulsions, for which he was taking "Prominal".) The patient became worse after his departure and "there seems to be no point in anything—no reason for living". The patient herself had had "nervous breakdowns". So also had a sister, who later "became mad". Needless to say, her gall-bladder was not removed.

Flatulence and variously described abdominal discomforts are often pain-equivalents, the stimuli coming from diseased organs, but not being intense enough to cause pain. But, like pain itself, they can come from the mind as well as from the peripheral organ.

Post-operative Neuroses: Wound Pain.

A surgical operation upon such backgrounds is not infrequently followed by a recurrence of pain. When the patient returns to vigorous activity, or when she suffers from fatigue, or from a febrile attack, or from a depressed pain-threshold at menstruation, or from coughing, or when the weather changes, or when she mentally concentrates upon her operation, pain may be felt in the neighbourhood of her wound. This pain is usually due to the wound, although it may not be referred accurately to it. Pain coming from deeper tissues is poorly localized, as has been shown experimentally by Kellgren, who injected hypertonic saline into the deeper tissues. Wound-neighbourhood pain is particularly severe during the period of incomplete

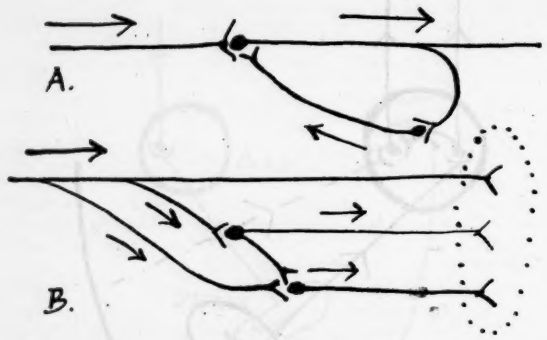

Figure V.

A and B, the inter-nuncial pool. The anatomical basis of convergence, summation, spread and reverberation (self-perpetuation).

healing, which lasts, as shown by the redness and thickness and stiffness of the wound, for at least twelve months, more if the wound has been infected, or if it is a vertical one, or if it is subject to unnecessary stresses through inaccurate coaptation. During this critical period the seeds of an anxiety neurosis may be sown, and symptoms thereafter may persist. The patient suspects that "the operation has not been a success" or that something is being hidden from her, perhaps a cancer. She also fears adhesions, for these have a sinister reputation in the public mind. Usually, it is a mistake to ascribe this type of pain to hypothetical adhesions. It should be explained as normal "wound-pain", which needs only time and patience for its cure.

The Neuroses in Gynæcology.

I have used appendicitis to illustrate the very important truth that pain due to a minor peripheral lesion may be aggravated to a serious degree by anxiety, and may then be reduced by reassurance, and finally disappear. This truth holds also for minor structural diseases of the female pelvic organs, and for the pain which may follow a pregnancy or a miscarriage. In such cases, the operation for adjustment or partial removal of pelvic organs is sometimes followed by a division of adhesions, and later by the piecemeal removal of more pelvic organs, till none is left, and then adhesions are again divided.

On one such patient, examined in 1953, the last operation had been performed by a general surgeon. His incision was distinguishable, because, after dividing adhesions, he had continued it upwards to remove a lazy gall-bladder. The patient continued with her pains.

The frail little woman with constant fatigue, headache, backache, constipation, flutterings, irregular menstruation and "the whites", tender pelvic organs, a mind filled with anxieties and a constitution inadequate to cope with them, the victim of previous futile operations, is not converted into a robust woman by the "clean-sweep" for an ill-attested or hypothetical infective condition of the pelvic organs. Such a patient may not return to the gynæcologist, for she knows that the "clean-sweep" was his trump-card, and that he has nothing more to offer. The gynæcologist thus cherishes the fond belief that he has wrought another cure, whereas his patient, after a brief respite, has merely gone to another variety of practitioner. Sometimes the patient goes elsewhere before the operation is undertaken, and I have seen patients whose pelvic pains had disappeared after the "clean-sweep" had been vetoed by the physician.

If ever the fair repute of gynæcologists and of gynæcology is called in question, it is through such patients. In 1884, Clifford Allbutt, Regius Professor of Physic in the University of Cambridge, wrote of the woman "entangled in the net of the gynecologist, who finds her uterus, like her nose, is a little on one side; or again, like that organ, is running a little, or it is as flabby as her biceps, so that the unhappy viscus is impaled upon a stem or perched upon a prop, or is painted with carbolic acid every week in the year, except during the long vacation when the gynecologist is grouse-shooting, or leading the fashion in the Upper Engadine . . ." The gynæcologists "looking only to the uterine organs, their reason bounded by the confines of the pelvis, attempt to stem the tides of general and diathetic maladies with little Partington-mops of cotton-wool on the ends of little sticks. That many of the cases need a judicious combination of local with general treatment is true, but in most of them the patient and the doctor are fascinated by the local phenomena, while nature herself is performing on a far larger scale" . . . "as wise to try to cure a syphilis by antiseptic dressing of its ulcers".

The tinkering gynæcology described by Allbutt is still with us, changed only in its form; the carbolic, the stems and the Partington mops are replaced by plications of the round ligaments, by resections of small cysts, of sclerotic ovaries and wombs, of harmless myomata, of large ovarian veins, by the "clean-sweep", and by the division of adhesions.

Mind and body of living man are inseparable in health and in disease, and they react one upon the other. It is by their giving practical recognition to this truth that physicians and surgeons are distinguished on the one hand from the quacks and charlatans who play upon the mind and ignore the local disease, and on the other from the travelling journeymen, the drawers of teeth, the setters of bone, the cutters for stone, the carpenters in flesh, who care not for the mind.

Not only gynæcologists, but all of us, general surgeons, general practitioners and surgical specialists, take some part in this futile operating upon the peripheral organ for a disease which lies at the centre of the personality. But we do it less, if we are fully aware of the problem.

Text-books of Gynæcology.

That gynæcology has dispossessed itself of a great part of its heritage is due, in some measure, to default by its teachers. In almost all its text-books, the mind as a source of visceral symptoms is ignored. In this respect, the only book fit for students, so far as I know, is "Diseases of Women" (edited by Roques, 1953). Even worse, one book, popular in this city, states that "mostly such diagnoses display the observer's ignorance; for operative investigation and post-mortem examination have too often shown them to be wrong", and it ignores the other part of the truth. The existence of the pelvic neuroses and the means of recognizing them are not clarified for the student by the quoting of other patients with undiscovered organic disease.

Pain of mental origin is very important in neurology, cardiology, gastro-enterology and so on, and it is too much to believe that such pain, caused by the strong deep undercurrent of the emotions, should spare that part alone, the

female pelvis, centred about the very organ which has given its name to hysteria. What wonder if our students, the general practitioners and gynæcologists of tomorrow, brought up in their formative years upon a diet lacking in essential factors, should later be deficient in judgement, and know not even the way by which it may be acquired. Not only are they given no guidance for recognizing the mental factors in disease, but they are not even informed of their existence. They learn a lot about tissue, and organ, but nothing about person. They do not know that there are patients in whom the structural defect (the retroversion, the slight or moderate prolapse, the small cyst or fibromyoma) should either be let alone or treated as a minor part of a much wider disorder. What wonder, in face of such teaching, that surgical forbearance is often denied to the neurotic, even by her general practitioner? "It is pathetic", writes Batchelor (1953), "to see women referred for psychiatric treatment after twenty years history of vague abdominal pains and after 'everything's been taken away' by well-intentioned but ill-judged surgery." If a school of gynæcology disclaims interest in the mental factors in gynæcological disease, it can achieve competence only in those simpler problems which require for their solution no more than a little manual dexterity, or the prescription of a hormone.

The problem is difficult, and cannot be solved by its neglect. In the hope of helping, at least with its partial solution, I propose to enumerate some marks or pointers which I have found of help in revealing the mental factor, and then to give some principles for their interpretation.

Indications that Mental Factors may be the Cause of the "Visceral" Symptoms.

General Behaviour and Demeanour of the Patient.

The neuropath may appear excessively nervous and over-talkative, or perhaps the reverse—reticent and mentally inaccessible. She may write a long complaining letter requesting an appointment, show impatient behaviour in the waiting room, reluctance to disrobe, and so on.

Physical Stigmata.

The neuropath may show bitten-down finger-nails, blushing, transient red blotches on the chest, excessive sweating and trembling. Abnormality in skin texture and in the texture and distribution of hair and subcutaneous fat is often associated with hormonal and sexual disorders and psychopathy.

Manner of Relating Symptoms.

Some relate their symptoms in a dull, unconvincing way and persistently give answers which are quite irrelevant, so that, after a prolonged effort, the clinician has nothing definite to write upon his case card, and he wonders if his attention has wandered. He experiences an indefinable difficulty in getting in touch with the patient. Such patients are often psychopaths.

Some describe their symptoms with vivacity, using such terms as "excruciating" and "agonizing" with no regard to their proper meaning. These are psycho-neurotics.

Others again describe their "awful" symptoms with an inscrutable smile, giving the impression of patience and supreme fortitude. These may be hysterics.

Significant Circumstances Preceding Symptoms.

Significant circumstances preceding symptoms are a family tragedy, the breaking up of a home by death or by divorce, or the illness or death of a friend or relative, especially from cancer.

The Symptoms Themselves.

The pain which does not vary with the function of the suspected organ, the pelvic pain which is neither periodic, nor affected by posture or micturition or bowel function, is likely to be non-organic.

A disproportion in severity between the symptoms and their suspected local cause suggests neuropathy—for example, major symptoms with minor structural defects, such as severe and disabling pains and morbid tiredness associated with slight or moderate uterine prolapse, or myoma.

Curious features which offend one's sense of fitness also suggest neuropathy, as in the following example.

Mrs. X., aged forty-nine years, was admitted to hospital on May 7, 1953, for investigation of abdominal pain for which no cause was found. After two weeks' rest in bed she complained for the first time of pelvic pain referred to a rectocele and cystocele, which appeared only when she strained. Later the patient confided that her mother had died at the age of seventy-one years at the end of fifteen years in a mental hospital. Mrs. X. attributed the mental disorder to a series of abdominal operations which preceded the admission to the asylum. I suspect the reverse order of causation—that the mental disorder caused the symptoms and the operations. These operations began when the mother was at the same period of life as the patient.

The disappearance, for no apparent reason, of one set of pains, and its replacement by another, suggest neuropathy.

Mrs. Y. had pelvic pains. These disappeared, after the "clean-sweep" advised by the gynæcologist had been vetoed by the physician. They were replaced by a supraorbital headache, which kept rhinologists, psychiatrists and neuro-surgeons busy for many years. She then returned to her pelvic pains and unsuccessfully attempted to secure a pelvic operation by falsely telling a surgeon that her general practitioner advised the immediate removal of a cyst from the pelvis. She then fell into the hands of the urologist, who "fixed" one kidney. A chance meeting between the urologist and the surgeon saved the second kidney from a similar restriction.

The pain, pelvic or otherwise, which is constant, unaffected by anything, unrelieved by analgesics, but not disturbing to sleep, is probably neuropathic. Insomnia may be present, but it is not due to the pain.

The presenting symptoms are more likely to be of neurotic origin if other symptoms are discovered which are typically neurotic. Foremost among these is a long-standing morbid tiredness, present even on first waking, with excessive fatigue on exertion, in a person of reasonably good nutrition and complexion, with a normal skiagram of the chest. The next most common is headache of long standing, usually a feeling of weight or pressure or boring on top of the head, or in the temporal regions, or a band or tightness around the head, unaffected by coughing or stooping or physical exertion. Others are globus, repeated belching, heart-burn, epigastric burning or fullness not clearly influenced by food, vomiting brought on by social activities, precordial pain uninfluenced by walking up an incline, deep sighing breaths, frequency of micturition which ceases at bed-time, long-standing pseudo-diarrhœa in which the stools are small, frequent and formed, sometimes with mucus, a tendency to faint or collapse without adequate cause, a food faddism which cannot abide certain foods unless they are taken unrecognized. Sometimes these symptoms are bizarre, such as the swelling of the abdomen of the childless woman, which began every evening, reached the size of a full-term pregnancy, and quietly subsided without passage of flatus while she sat, reading the evening paper with her husband.

Mental symptoms which mark the neuroses are insomnia, inability to concentrate, irritability, failure of memory, phobias and obsessional thinking or acting.

Mental symptoms which may mark the more serious psychoses are repeated depressions, sometimes described as "nervous-breakdowns", a feeling that the head is muddled, apathy with loss of interest in family, work, play and life in general. Such depressive psychoses are sometimes a pitfall, in that they may present with abdominal or pelvic pains.

The Personal History.

Years ago, in a brief experience of obstetrics, while waiting for the pulsations of the umbilical cord to cease, I often tried to distinguish the temperament of the new-born infant as it lay upon the labour-bed. Not infrequently the petulant cry, the clenching and unclenching of the tiny

fist, the tremulous and spastic gesticulations and the aimless but vigorous kicking, suggested to me that a neurotic of hyperkinetic type was launched upon the world.

In the next stage our neuropath is found, "mewling and puking in the nurse's arms", not only fretful, and vomiting, and difficult to feed, the gastro-intestinal tract resenting even the mother's milk, but over-excitable, and prone to convulsions from slight causes.

A little later, the child is "creeping like snail unwillingly to school", or perhaps even refusing to go, excessively timid, or wilful and uncontrollable, subject to asthma, to absences from school, perhaps due to headaches or bilious attacks or to vague causes, a restless, fitful sleeper, disturbed by sleep-talking, sleep-walking or night terrors.

Later still we find a readiness to faint or collapse, vaguely explained absences from work, frequent changes of employment, and previous operations, multiple and with vague pathology. The clinician may not learn till afterwards, from a relative or friend, of the many doctors consulted for all sorts of indefinite illnesses, of the prostration and delay in convalescence without adequate reason, and of the nervous breakdowns.

She is likely to be a neuropathic who is reared, indulged and undisciplined, an only child, or who has grown up in the bitterness of the pre-divorce home, then to have her loyalties riven between separated parents. If the marital condition of the parents is of importance, that of the patient herself is even more so. Pelvic pain, with headache and a morbid general fatigue, may come from a mind which has no rest, day or night, from the gnawing suspicion, or even from the certain knowledge, of infidelity in the spouse.

Family History.

Sometimes an intractable pain, after years of fruitless therapy, is found to have no other basis than that the patient is a relative of the insane, herself not far from the border-line; hence the significance of insanity, depression, epilepsy, alcoholism, shock therapy, prolonged inexplicable disease, nervous breakdowns without adequate cause, and various instabilities among the relatives, through as many generations as discoverable, with the inclusion of even the children, for a wilful, uncontrollable child may point to a weakness in the parents. More than the average sprinkling in the family of artists, musicians, actors and prodigies is not without significance, for "there is no great genius without a tincture of madness".

Physical Examination.

Multiple scars upon the abdomen usually indicate hysteria, if intestinal obstruction has been excluded.

Physical examination reveals not only local structural change, but also the general sensitivity of the patient. If she jumps to a skin-pinch, squirms to gentle pressure upon an easily palpable abdominal aorta, and kicks when the patella tendon is tapped, the tenderness of the uterus or ovary assumes less significance, and the "clean-sweep" for a hypothetical infective condition may not be indicated.

The surgeon has learned surgical restraint in regard to the tender testicle of normal size. So also should the gynæcologist in regard to the tender ovary.

Years ago, I attempted to estimate sensitivity quantitatively, by placing the rough surface of a nutmeg grater against the patient's skin, under the cuff of the sphygmomanometer, and noting the pressure at which the patient complained. Three patients were of special interest. They had recently been discharged from hospital after operations from which their surgical convalescence had been normal. But they were remarkable for a nervousness so excessive that they were actually non-cooperative. To my astonishment they proved so indifferent to the nutmeg grater that they gave no sign of discomfort, even when the pressure exceeded 300 millimetres of mercury and the points of the grater had perforated the skin. The human mind is indeed complex, and not measurable by the methods of physical science.

Time, Patience and Tact.

In the difficult case, the search of the patient's background is time-consuming, and requires much patience. The first consultation is the most important, and the examiner must be prepared to accept its unexpected length, even if it means a dislocation of the time-table of his waiting-room, and his own late return for dinner. The patient must be made to feel that there is no hurry and that the time and attention of the examiner are devoted entirely to her symptoms and to herself.

Sometimes repeated consultations are helpful, for they provide evidence of the constancy or variability of the symptoms and signs.

The patient should be encouraged to tell her story in her own words. Leading questions should be avoided in the early stages, but they often prove useful later. They must not be framed so as to suggest the answer. In the interpretation of the answer, the expression of the patient's face and of her voice must be weighed with her words.

Discretion and tact are particularly necessary during inquiry into the mental quality of the family. Patients are more likely to reveal the existence of insanity if the questioning suggests strain, or shock, or sorrow, rather than hereditary taint. Sometimes patients falsify or conceal symptoms which point to nervous disorder, for they have an urge to find something organic even if an operation results, so long as the fault lies in their womb or in some other organ, anywhere but in themselves.

Some neuropathic women look upon the uterus as no more than "a symbol of uncertainty and danger", and such women may not rest until the uterus is removed, even though it is innocent of organic disease. Judgement may indeed be difficult.

Sometimes, while the patient is dressing, a quiet talk with the accompanying relative or friend, husband or mother, may reveal valuable information about the childhood or family background, personal peculiarities, present strains or stresses, harmony or discord in the home, and so on.

Principles of Interpretation.

Not only must the foregoing marks be recognized, but each must be given a proper measure of importance.

Certain general principles of interpretation must be borne in mind.

1. There is no sharp dividing line between the normal and the diseased. It is therefore necessary to take into consideration not only the nature but also the degree of deviation, and to ask ourselves, "if too much, how much too much?"; "if too little, how much too little?". For example, anxiety may be normal or abnormal, and its degree must be assessed in relationship to its cause.

2. The clinician must be ready to make a diagnosis, even in the absence of the full text-book complement of symptoms and signs. In other words, disease must not be excluded because one or more of its symptoms or signs is lacking. The typical text-book picture is the exception rather than the rule.

3. The detection of one or two symptoms or signs of a disease is not necessarily proof of its presence.

4. If a certain disease is found, it is not necessarily the cause of the patient's symptoms.

5. In structural disease there is always a psychoneurotic correlate, and a psychoneurotic disorder is sometimes based upon a minor organic abnormality.

6. Usually, direct evidence, derived from the presenting symptoms, weighs more than collateral evidence derived from past illnesses and family history. The final diagnosis is based upon the whole clinical picture, which should be as complete as possible. The significance of each symptom and sign is modified by other symptoms and signs. Pointers to mental factors may thus have more significance in one setting than in another. The fact that the patient's mother

is in a mental hospital may have little significance if the patient complains of intermenstrual bleeding, but much if she has pathological fatigue with a minor degree of uterine prolapse or a fibroid tumour.

The Hippocratic Art and its Rewards.

The patient comes with fear in her heart—fear of disease and of operation, profoundly anxious not only for herself, but also for her home and its finances, and for husband and children who must somehow be cared for during her absence. To give that patient the assurance, well founded upon a thorough investigation, that her pain has no serious basis and that an operation is not necessary, and to see the light of relief in her countenance and to learn in a few months that her pain has disappeared, is one of the greatest satisfactions which we can enjoy. Sometimes, even before we give our reassurance, the taking of the history has shown to the patient the relationship of her symptoms to the strains and stresses of her life, and understanding brings relief. The timid ones come year after year, the old symptoms gone, but a new set in their place now to be exorcised.

General practitioners and physicians would, I think, agree that patients with simple anxiety neuroses cured by the uncovering and dispelling of their fears far outnumber those with a more serious psychopathy. This estimate of relative frequency has been confirmed by actual reviews carried out in England and in France (Medical Research Council, 1930). Some psychiatrists do not agree with it, perhaps because they do not see a representative section of the community. It is probable that this factor of selection, which loads the practice of the psychiatrist with the more serious cases, works in the reverse way in a surgical practice, loading it with the simpler cases, in which fear of organic disease is dominant. The more serious cases, with cause more deeply seated, though not within the province of the surgeon's therapy, are yet very much his concern, for he should recognize them, and so avoid ill-judged operations.

The satisfaction in saving a patient from an unnecessary operation derives from the avoidance, not only of immediate fears and dangers, but also of those which come later. Adhesions from previous operations (chiefly gynæcological and appendiceal) vie with carcinoma as the commonest internal cause of acute intestinal obstruction.

For the clinician, apart from his well-earned fee, not the least reward for his painstaking efforts to comprehend the mental as well as the physical, is the clinical wisdom, the "good judgement" which he may develop over the years, and which will enable him to guide his patients with greater safety, as though by a sixth sense.

This, then, is the Hippocratic art, the heritage of the true Asclepiad, whether general practitioner, physician, surgeon or specialist—to apprehend the patient in totality, to judge correctly the relative importance of each factor in the disease, often to uncover and dispel groundless fears, sometimes to use other psychotherapy, diet, drugs and scalpel.

Whether we are general practitioners, surgeons or surgical specialists, there are better avenues for our self-expression than the use of the knife.

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A BLOOD GROUP GENETICAL SURVEY IN NEW HEBRIDEANS AT EFATE.

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THE New Hebrides Archipelago consists of 13 large islands and about 80 smaller ones lying about 2000 miles east of the coast of Northern Australia, about 400 miles north-east of New Caledonia, and a comparable distance from Fiji. The group extends 440 miles, with a total area of some 5700 square miles, and constitutes roughly a double chain of islands which are primarily of volcanic origin, and still have some active volcanoes. The high islands, which are largely of basalt and recently erupted material, are generally free of coral reefs, and the shores rise abruptly from deep water. To the north are the generally low-lying Banks group of islands and then the Torres group.

A government estimate of the population in 1920 was 59,000, while another made by Harrisson (1937) was 45,000. It has been estimated by Speiser (1913) that in 1880 the population was about 600,000 and that still earlier the area contained over 1,000,000 inhabitants. It is generally agreed that depopulation in this area has been very real, and that the causes were primarily the following: (*a*) violent epidemics due to diseases introduced by whites during contact; (*b*) slaughtering of the natives by sandalwood hunters during the latter portion of the nineteenth century; (*c*) "blackbirding" or recruiting of labour for plantations in Queensland and Fiji. Although these labourers were to be returned to the New Hebrides after the completion of their contract, many died during their labour period.

The languages of the group belong to the Melanesian and Polynesian linguistic families, but are split up into numerous dialects.

Racial Origin of the Inhabitants.

Speiser (1913) calls the inhabitants Melanesian in race, although he notes that representatives of the Micronesian race also occur in the New Hebrides, and that on some islands there are settlements of Polynesians. He identifies four strata of racial migration into the New Hebrides in the following order: (i) a short, dark, curly-haired group—which Birdsell (personal communication) suggests might presumably be identified with the Negrito; (ii) several varieties of tall Melanesian people coming in successive migrations; (iii) old Polynesian migration, derived from the eastward migrations of these people into Polynesia; (iv) recent Polynesian elements coming to the New Hebrides from the east.

As the present survey was conducted on natives who originated mainly on the island of Efate, the comments on these people by two early observers may be used as a basis for a later discussion on blood group gene frequencies. Somerville (1894) refers to Mele just off the shore of Efate, where a semi-Fiji colony is established, and he also speaks of the people of Fila as being kinsmen of the Mele people. (We assumed that the people were Fijian in appearance rather than that they were actually of Fijian origin.) Campbell (1873) makes the following statement:

> This little island of Fili and another called Melé, about three miles from it, are inhabited by two very powerful tribes. Fili, the larger of the two, is not over a few acres in size, and both of them are used by the natives merely as places of residence,[1] their plantations all being on the mainland.

(This practice was adopted for reasons of health and also for protection against raids of interior or bush people, for cannibalism was common.)

[1] The people of Mele had been moved to the mainland just prior to this investigation in 1951.

TABLE I.

The A-B-O Blood Groups and Gene Frequencies. New Hebrides (Efate).

Population Sampled.	Number of Blood Samples Tested.	Blood Groups.					Gene Frequencies.		
		O.	A_1.	A_2.	B.	A_1B.	*A.*	*B.*	*O.*
Fila	70	51	11	—	7	1	—	—	—
Mele	13	10	3	—	—	—	—	—	—
Total	83	61 (73%)	14 (17%)	—	7 (8%)	1 (1%)	0·093	0·048	0·859
Pango	36	19	12	1	3	1	—	—	—
Erakor	34	24	4	—	6	—	—	—	—
Eratap	2	2	—	—	—	—	—	—	—
Total	72	45 (62·5%)	16 (22%)	1 (1%)	9 (12·5%)	1 (1%)	0·137	0·075	0·788
Miscellaneous	17	8	4	—	4	1	—	—	—
Total tested	172	114 (66·3%)	34 (19·8%)	1 (0·6%)	20 (11·6%)	3 (1·7%)	0·117	0·069	0·815

It is a curious fact that although these two islets are within 100 yards of the main island of Efaté, and the natives of them must come into frequent contact with the Efatése, they are inhabited by quite a different people. They speak a totally different language from that of the Efatése—nearly pure Malay; and in form they resemble the Eastern Polynesians more than any of the New Hebrideans. There seems little doubt that these people have come in canoes, probably at no very distant date, from some of the eastern islands, and have settled on these islets, and that since then there has been no intermarriage between them and their neighbours on Efaté.

Although the observations of Somerville and Campbell were recorded about sixty and eighty years ago respectively, the present survey, somewhat by chance, deals with the people referred to by them. In the tables to be presented the results found for the peoples of Fila and Mele are compared with those for the Efatese people from the villages of Pango, Erakor and Eratap, in order to see if the gene frequencies for the inhabitants of Fila and Mele today reflect the influence of non-Melanesian peoples, presumably from Polynesia. The peoples of Pango, Erakor and Eratap might be expected to represent a sample of the basic population of Efate.

An examination of genealogies recorded in the present survey shows that about 15% of the subjects tested were the product of a marriage outside the tribe, and that some of them were in the fifty to sixty years age group. Thus it appears that for at least sixty years the peoples of Fila and Mele have been subjected to an exchange of genes by intermarriage with other tribes. We are not aware of any recent anthropological report on the peoples investigated in the present survey, and further, we do not know whether anthropologists subsequently confirmed the observations recorded by Campbell and by Somerville.

Another aspect which involves the possibility of Tasmania having been populated from the New Hebrides and not from Australia is suggested by Macintosh (1949), who, after an extensive study of winds and currents, makes the following observations:

> From the New Hebrides to Tasmania a curvilinear voyage to the N.W., then S.W., then S., then S.E., then S.W., is theoretically possible under the influence of current and wind in the months of November, December and January. The journey might require 50 to 80 days to cover about 2,600 miles. Examples have been quoted to show that such a voyage has often been surpassed. A direct route of 1,700 miles from New Caledonia to Tasmania is probably impossible.

TABLE II.

The M-N Types, S Distribution and Gene Frequencies. New Hebrides.[1]

Population Sampled.	Number of Blood Samples Tested.	M-N Types.			Frequency of Genes.		Proportion of Samples S-Positive.	Distribution of S-Positive Cells.		
		M.	MN.	N.	*m.*	*n.*		M.	MN.	N.
Fila	70	3	39	28	—	—	1/70	0/3	0/39	1/28
Mele	13	2	7	4	—	—	0/13	0/2	0/7	0/4
Total	83	5 (6%)	46 (55%)	32 (39%)	0·337	0·663	1/83	0/5	0/46	1/32
Pango	36	1	16	19	—	—	1/36	0/1	0/16	1/19
Erakor	34	3	15	16	—	—	5/34	0/3	1/15	4/16
Eratap	2	—	1	1	—	—	0/2	0	0/1	0/1
Total	72	4 (6%)	32 (44%)	36 (50%)	0·278	0·722	6/72	0/4	1/32	5/36
Miscellaneous	17	1	6	10	—	—	0/17	0/1	0/6	0/10
Total tested	172	10 (5·8%)	84 (48·8%)	78 (45·3%)	0·302	0·698	7/172 (4·1%)	0/10 0	1/84 (1%)	6/78 (8%)

[1] Approximate chromosomal frequencies calculated from the figures in the present survey are as follows: $ms = 0·301$; $mS = 0·001$; $ns = 0·679$; $nS = 0·019$.

TABLE III.

The Rh Types and Gene Frequencies. New Hebrides.

Population Sampled.	Number of Blood Samples Tested.	Rh Phenotypes.					Rh Gene Frequencies.			
		Rh_1Rh_1.	Rh_1Rh_2.	Rh_2Rh_2.	Rh_1Rh_2.	rh'rh'.	R^1.	R^2.	R^0.	r'.
Fila	70	50	2	0	18	0	—	—	—	—
Mele	13	6	1	2	4	0	—	—	—	—
Total	83	56 (67%)	3 (4%)	2 (2%)	22 (27%)	0	0·82	0·16	0·02	0
Pango	36	34	0	0	2	0	—	—	—	—
Erakor	34	23	0	0	11	0	—	—	—	—
Eratap	2	2	0	0	0	0	—	—	—	—
Total	72	59 (82%)	0	0	13 (18%)	0	0·91	0·09	0	0
Miscellaneous	17	12	0	0	4	1[1]	—	—	—	—
Total tested	172	127 (73·8%)	3 (1·7%)	2 (1·2%)	39 (22·7%)	1 (0·6%)	0·786	0·129	0·009	0·076

[1] The sample shown as rh'rh' showed no agglutination with six potent and specific anti-Rh_0 sera. It was not tested by the anti-globulin technique, and thus may represent a possible homozygous Rh_0 variant. The subject was one of two tested who originated on the island of Pentecost.

An alternative arc voyage to the Queensland coast from the New Hebrides also appears possible.

It appears that for native contact between Australia and Tasmania across Bass Strait the only likely possibility would be an intentional voyage from the N.W. corner of Tasmania as far as King Island, followed by an involuntary one from King Island to Wilson Promontory. . . . A reverse voyage from Southern Victoria to the north-west coast of Tasmania would appear on the data to be impossible.

The theory presented by Macintosh requires that the present-day cycles of winds and ocean currents have prevailed for thousands of years.

Materials and Methods.

The blood samples were collected on Efate during the period October 23 to 26, 1951, and were received in Melbourne for testing on November 2, 1951.

The islands represented in the 172 samples tested were as follows:

Northern New Hebrides:

Espiritu Santo 1, Maewo 1, Pentecost 2; total 4.

Central New Hebrides:

Efate 155 (Fila 70, Mele 13, Pango 36, Erakor 34, Eratap 2), Nguna 3, Malekula 4; total 162.

Southern New Hebrides:

Tanna 1, Aneityum 1, Futuna 3, Eromanga 1; total 6.

In the 172 blood samples tested there were 91 from males, which included 26 aged under twenty-one years, and 81 from females, which included 19 aged under twenty-one years.

An estimate of the Efate population in 1951 by one of us (S.M.) was as follows: Fila 257, Mele 510, Pango 171, Erakor 319, Eratap 92; total 1349. Of these, blood samples were taken from 155 persons.

The methods used in collecting the samples in the field and in testing them in the laboratory in Melbourne have been described again in detail by Simmons, Graydon, Semple and Taylor (1951).

Results and Discussion.

The A-B-O Frequencies.

The A-B-O frequencies are presented in Table I. The calculated frequencies for 172 natives of New Hebrides are as follows: $A = 0{\cdot}117$; $B = 0{\cdot}069$; $O = 0{\cdot}815$. There were 34 samples of A_1, one of A_2, and three of A_1B.

The M-N-S Frequencies.

The M-N-S frequencies are presented in Table II: $m = 0{\cdot}302$ and $n = 0{\cdot}698$. Seven of 172 samples (4·1%) were S-positive. The calculated gene frequencies were: *ms*, 0·301; *mS*, 0·001; *ns*, 0·679; *nS*, 0·019.

TABLE IV.

Blood Group Frequencies in the Peoples of New Hebrides, New Caledonia, Loyalty and Pine Islands and Fiji.

Population.	Number Tested.	*A*.	*B*.	*O*.	*m*.	*n*.	R^1.	R^2.	R^0.	R^z.	r'.
New Hebrides	172	0·117	0·069	0·815	0·302	0·698	0·786	0·129	0·009	0	0·076
New Caledonia (North)	198	0·206	0·074	0·718	0·273	0·727	—	—	—	—	—
New Caledonia (Centre)	110	0·140	0·049	0·809	0·236	0·764	—	—	—	—	—
New Caledonia (South)	92	0·201	0·090	0·648	0·293	0·707	—	—	—	—	—
Pine Islanders	48	0·232	0·041	0·736	0·333	0·667	—	—	—	—	—
Loyalty Islanders	110	0·261	0·025	0·707	0·386	0·614	—	—	—	—	—
New Caledonia, Loyalty and Pine Islanders	558	0·204	0·059	0·731	0·297	0·703	0·833	0·107	0·054	0·004	0
Fiji	310	0·206	0·106	0·688	0·326	0·674	0·840[1]	0·050	0·110	0	0

[1] Rh tests performed on 110 blood samples only.

The Rh Frequencies.

The Rh frequencies are given in Table III: $R^1 = 0{\cdot}786$, $R^2 = 0{\cdot}129$, $R^0 = 0{\cdot}009$, $r' = 0{\cdot}076$. A total of 172 samples were tested with a potent anti-rh^w(C^w) serum. No example of rh^w(C^w) was detected.

The Lewis Blood Group and Salivary Secretion.

Four out of 170 blood samples (2·4%) were Le(a+). Three of these were from persons who originated on Fila, and one person, who was also of subgroup A_2, originated on Pango. A total of 43 saliva samples were tested for A, B or H salivary secretion, and of these 41 were secretors and two were non-secretors. The two non-secretors were, however, Le(a−).

The Blood Group P.

In tests for the blood group P, 56 out of 145 (38·6%) gave clear-cut positive reactions. Weak or doubtful reactions (28 out of 145—19·3%) were also observed. The results are presented with reserve.

The Duffy (Fy^a) Blood Group.

In tests by the use of the anti-globulin technique for the Duffy blood group, 24 out of 24 samples (100%) were Fy(a+).

The Kell (K) Blood Group.

Tests were performed on the same 24 samples for the Kell (K) blood group, and of these four out of 24 were regarded as K+. The results are presented subject to confirmation.

Ability to Taste Phenyl Thiocarbamide.

Tests of ability to taste phenyl thiocarbamide were performed on 196 individuals. Of these, 90 (45·9%) were recorded as tasters, 88 (44·9%) as weak tasters, and 18 (9·2%) as non-tasters.

Other Observations.

The question posed earlier in this paper was whether the gene frequencies for the tribes of Fila and Mele would indicate Polynesian influence, while the frequencies for Pango, Erakor and Eratap might indicate that these people would represent more closely the basic population of Efate. There were unfortunately only 83 individuals representing the former and 72 representing the latter groups, and the comparisons of gene frequencies based on such small numbers may be misleading and, further, are being made today about eighty years after the original observations were published. Further, the gene frequencies available for Polynesians are still inadequate, in that for A-B-O frequencies we must depend on two series, one from Hawaii and one from the Maoris of New Zealand, and for the M-N and Rh frequencies on Maoris only.

From Tables I, II and III it will be seen that the frequencies for the Fila and Mele tribes are not noticeably different from those of Pango, Erakor and Eratap, but there are some differences worthy of note. From the tabulated gene frequencies (Simmons, Graydon and Semple, 1953) for peoples of Micronesia, Indonesia, Melanesia and Polynesia it is seen that Polynesians have the highest *A* frequency, negligible *B*, approximately equal *m* and *n*, and also equal values for R^1 and R^2.

The people of the New Hebrides have the lowest *A* frequency seen in the four geographical areas (0·093 to 0·137), which does not fit in with Polynesian influence, but the low *B* frequency could indicate such influence, or a basic stock low in *B*. The frequency of *O* is the highest found by us for the Pacific peoples.

The tribes of Fila and Mele have a slightly raised value for *m* (Table II), and this could be due to Polynesian effect. There are insufficient data available to allow discussion of the *S* distribution in the *M-N-S* system; however, one sample out of 83 from Fila and Mele was S-positive, while six out of 72 samples from Pango, Erakor and Eratap were S-positive. The difference is significant. In 172 blood samples 4·1% were found to be S-positive, while 12·2% of Maori samples were S-positive. No S-positive sample was found in 44 Polynesian people from Kapingamarangi. No other S data within the New Hebrides area are available for comparisons to be made.

In the Rh system (Table III) the tribes of Fila and Mele have frequencies for R^1 and R^2 of 0·82 and 0·16 respectively, while those of Pango, Erakor and Eratap have corresponding frequencies of 0·91 and 0·09. The former tribes with lowered R^1 and raised R^2 frequencies could have acquired the increase in R^2 by greater Polynesian influence than the latter tribes.

It might be suggested that the evidence favoured a Polynesian component in the New Hebrides people and that the Polynesian component of the peoples of Fila and Mele was perhaps greater than that in the peoples of Pango, Erakor and Eratap, as indicated by (*a*) a lower frequency of *B*—0·048 (0·075), (*b*) a higher frequency of *m*—0·337 (0·278), and (*c*) lower R^1 and higher R^2—0·82 and 0·16 (0·91 and 0·09) respectively.

The next point to consider is the relationship of the peoples of the New Hebrides and Pacific peoples generally. Examination of the blood group frequencies found in Micronesia, Indonesia, Melanesia and Polynesia (Simmons *et alii*, 1953) shows that the New Hebrides frequencies fit best into their own geographical area, and that the closest corresponding gene frequencies belong to those of their neighbours in New Caledonia, in the Loyalty and Pine Islands and in Fiji. The tabulated frequencies selected to illustrate this are shown in Table IV.

Simmons, Graydon, Avias and Williams (1949), in dealing with the New Caledonians, Loyalty Islanders and Pine Islanders, also presented *A*, *B*, *O* and *m*, *n* frequencies according to the language spoken within the area. Some of the frequencies bear a striking resemblance to those for the people of the New Hebrides. In a discussion on the New Caledonians the following comments were made:

> Let us assume a Negrito-Murrayian-Carpentarian complex with blood-group frequencies similar to those found in the Australian as basic for New Caledonia. Our results would indicate that this complex has been modified by other influences—least in the north-west and north centre and most in the extreme north, the extreme south and the Loyalties. In the extreme north an increase in the B factor with no appreciable increase in the frequency of M suggests, as expected, later Melanesian influence. In the Loyalty Islands an increase in M unaccompanied by an increase in the B factor is consistent with Polynesian admixture. The figures indicate that the frequency of the *B* factor must be very low indeed in the islands of Ouvea and Lifou; this, though confirmation of a strong Polynesian element, is not in agreement with the suggestion that later Melanesion migrations have entered the Loyalty Islands from the north-west. That the Polynesian influence has extended further is indicated by similar alterations to the frequencies in Pine Island, south New Caledonia, and a section along the north-east coast. One might also suggest a separate influence raising the frequency of the B factor in south-east New Caledonia and Mare, the southernmost island of the Loyalties. This could be white, yellow or both, and is very recent. All these deductions are supported by other evidence. The average gene frequencies in New Caledonia are remarkably like those of the Fijian, the main difference being the higher frequency of B in the latter. Possibly the same components in different proportions are present in each group, the Negrito and Malayo-Polynesian element being more dominant in Fiji, and the Murrayian-Carpentarian and the true Polynesian elements more dominant in New Caledonia.
>
> Evidence other than that of blood grouping indicates an underlying Negritoid population throughout the south-west Pacific Islands. This component is dominant in Melanesia, less dominant in New Caledonia and in the minority in Australia. Owing to the influence of this component we might in this series (New Caledonian) expect a blood-grouping picture intermediate between those of New Guinea and Australia. This is the case with regard to the B factor, the Rh types and perhaps also the M-N types; but without specific data for each component it is impossible to separate the Negritic influence from those of other components present in varying degree in all three groups.

If the tentative suggestions in regard to the possible racial complex in New Caledonia, the Loyalty and Pine Islands and Fiji are accepted as corresponding with the gene frequencies found, then the New Hebrides people fit neatly into this group of peoples. The New Hebrides A-B-O, M-N and Rh types and gene frequencies have a close counterpart in those found for the 110 people tested in the centre of New Caledonia, for these people also possess the unusually low *A* frequency. It would be fair to say, on the basis of our findings, that the basic population of New Caledonia, Fiji and the New Hebrides was originally the same, and that the gene frequency variations seen today represent the changes due mainly to Melanesian or Polynesian or other admixture in certain areas, or with particular tribal groups. The basic population would have been characterized by high *O*, low *A* and probably zero *B*, moderately high *n*, and moderately high R^1 with R^2 well represented. On this score it would not be unreasonable to think that this same basic stock was also present in Tasmania and Australia, for the present-day Australian aborigines have gene frequencies which fit this picture very well. The assumption that the Tasmanians and original New Hebrideans were of the same basic stock fits the theory of Macintosh (1949) that Tasmania could have been populated originally from the New Hebrides. However, as the Australian aborigines and the early New Hebrideans appear also to have been of similar basic stock, the evidence can be quoted only as being consistent with Macintosh's theory, but not as supporting it.

Summary.

1. A total of 172 blood samples collected from natives of Efate, New Hebrides, have been tested for the blood groups A_1-A_2-*B*-*O*, *M*-*N*-*S*, *Rh*, Le^a (with correlation of *A*, *B* or *H* secretion in saliva), P, Fy^a and K. Tests for taste blindness to phenyl thiocarbamide were also performed.

2. The calculated gene frequencies are as follows: *A*, 0·117; *B*, 0·069; *O*, 0·815; *ms*, 0·301; *mS*, 0·001; *ns*, 0·679; *nS*, 0·019; R^1, 0·786; R^2, 0·129; R^0, 0·009; *r'*, 0·076. One example of subgroup A_2 was found. No rh^w (C^w) was detected.

3. Four out of 170 blood samples (2·4%) were Le(a+), and of 43 saliva samples 41 were from secretors and two were from non-secretors.

4. In tests for the blood group P, 38·6% of strong reactions were obtained, while there were 19·3% weak or doubtful reactions.

5. In tests for the Duffy blood group, 24 out of 24 (100%) Fy(a+) reactions were obtained, while in tests for the Kell blood group on the same samples four out of 24 were regarded as K+.

6. Phenyl thiocarbamide tests were performed on 196 subjects, and of these, 45·9% were tasters, 44·9% weak tasters and 9·2% non-tasters.

7. An attempt has been made to discuss the gene frequencies found in terms of racial components. It is suggested that the same basic component was probably common to the peoples of Fiji, the New Hebrides and New Caledonia, and the aborigines of Tasmania and Australia.

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SYNERGISTIC PSYCHIATRY.[1]

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OUR modern age has been called the age of specialization, which doubtless is true enough. This specialization, with its allegedly greater intensity of living, has been held by some to have increased the psychological and emotional stresses amongst us. However, history shows us that specialization has been present in human communities throughout the ages.

If we reflect upon the reasons that made the nations of the past great in their time, we find that there is this common characteristic—namely, special knowledge and special skill. You will recall the administrative and commercial skill of ancient Egypt, the cultured and realistic patriotism of ancient Greece, the political and martial organization of the Romans, and the maritime proficiency of the Venetians.

Throughout known history man has always been prepared to accept as knowledge and wisdom the teachings of contemporaries who were more experienced and wiser in certain matters. It therefore can be understood that a person racked with physical pain or distraught with mental anguish would seek the advice of the wisest men of his day. Just as we today turn to the expert technician to elucidate our problems in mechanics or electronics, so, when sick, the ancient Egyptian sought the aid of the priests and religious teachers who were accepted as both spiritual and physical healers. Thus, when the priest was asked why an afflicted person was tortured by melancholy or tormented by excitement he was able to explain the whole phenomenon. Did they not have gods? Were not the gods jealous of their omnipotence and resented man's puny efforts to outdo or circumvent the plans of the deities? Were not the gods suspicious of favours conferred more freely upon another deity? A god not appropriately propitiated and honoured would wreak dreadful vengeance upon man and mankind in his paroxysms of malevolent wrath.

Those suffering from melancholy came to the learned priests of Egypt in considerable numbers. The temples, situated in shady groves and gardens, proved a soothing and restful retreat where the distracted were encouraged to indulge in refreshing and wholesome exercise. Gaily decked boats transported them to enjoy rural concerts and the pure breezes of the Nile. In short, all their time was taken up with some pleasurable diversion.

This description is probably inaccurate and exaggerated, as the Egyptians did not recognize the mind as the site of emotional disorders; but it is likely that many devotees attended idyllic temples and practised their treatments in pleasant and restful surroundings.

[1] President's address, delivered at the annual meeting of the Australasian Association of Psychiatrists on October 12, 1953, at Sydney.

It is both significant and appropriate that Hippocrates, "the father of modern medicine", should also have laid the foundations of modern psychiatry. To an audience such as this it would be quite unnecessary to give a detailed account of this famous man. He lived in the Golden Age of Greece, about 460 to 378 B.C. Much of what is known of him is legendary; but he developed a science widely differing from the healing arts practised in the temples. Contemporary with Hippocrates were Pericles, Thucydides, Sophocles, Euripides and Socrates.

It is known that Hippocrates inherited his medical background from the priest-physician. Throughout the country there were numerous healing temples, one of which was situated on the island of Cos, where it is thought Hippocrates learned the art of healing.

Hippocrates held the brain to be the site of a number of disorders that were thought to be due to occult forces. The common name for epilepsy, for instance, was "the sacred disease". Hippocrates held that it was no more sacred or divine than any other disease, but came from natural causes. He even accused those who thought otherwise of being charlatans who invoked the gods in order to hide their own lack of skill. Hippocrates was a clinician rather than a theorist or a philosopher. He based his formulations upon careful observation. He held that proper diet was an essential of good health, and that climate affected both body and mind. He described melancholia, mania, mental deterioration and probably hysteria. Although he mentioned the dreams of sleep, he did not elaborate the concept into psychological theory, or he might have forestalled Sigmund Freud.

Hippocrates was an outstanding figure in the medicine of his day. I should like to believe that he was the product of his time and that there were many other less famous men who practised medicine as he did, and that there were many, many patients who were benefited by these enlightened methods.

The Golden Age of Greece had promised a rapid advance in medicine and in the rational treatment of the mentally sick; but with the fall of Rome, western Europe was swamped with superstition and ignorance. The mysteries of the mind became the province of the occult, and mental abnormalities were regarded as due to the malign influence of the devil and his demons. Even recorded advances in medicine and other sciences left mental treatment floundering in a morass of ignorance. The victims of mental sickness during the Middle Ages were treated with greater understanding in the Mohammedan countries. The Moslems subscribed to the creed of Hippocrates that the insane were suffering from diseases of the mind, and preserved the physician as distinct from the religious teacher.

On the Continent monastic asylums were established in some numbers during the fifteenth and sixteenth centuries. Here the insane were subjected to elaborate rites and rituals to impress and humiliate the devil. Often the actual treatment of the patient was cruel in the extreme. The monks did not spare themselves from merciless scourgings whenever the Evil One was permitted to enter their thoughts, and therefore they could be expected to treat their patients—the temporary domicile of Satan—with severity.

The Renaissance came. England and Europe had rediscovered the learning of the ancient Greeks. A literary period, rivalling the greatness of Greece itself, was born. Many branches of science shed superstition for real knowledge. Religious revolutions took place. But this wonderful resurgence of truth left the attitude to the mentally sick unchanged. Rich and poor, professor or peasant, Protestant and Roman Catholic, all vied with each other in persecuting "the children of the devil". Witches by the hundreds were done to death in the seventeenth century. It is difficult to understand that the delusion of "demon possession" could survive an unprecedented revival of learning and culture. It is true that an occasional protest was made and that even special institutions were founded such as the Bethlehem Hospital, London. This hospital was soon to be known as "Bedlam", which became a word in our language descriptive of conditions remarkable for uproar and disorder.

A thousand years ago, legend tells us, there lived a feudal king and his lovely daughter, Dymphne, whose wondrous beauty made her father determined to make her his consort. Princess Dymphne fled from the king's attentions; but she was overtaken and killed near the village of Gheel in Belgium. In her martyrdom Dymphne found peace of body and soul. Her successful fight against evil caused the monks of the village of Gheel to regard the ground where Dymphne was slain as sacred, and there a shrine was built in her honour. Princess Dymphne was later canonized, and Saint Dymphne pervades the shrine as the symbol of purity attained through distress and anguish. Many grief-stricken and distressed people worshipped at the shrine of Saint Dymphne and found consolation. The monks found that the crowding pilgrims overtaxed their accommodation. The villagers of Gheel were approached and besought to accommodate pilgrims awaiting their turn for admission to the treatment annexe. The villagers were persuaded to house pilgrims, and it came about that those without a pilgrim in their home were scorned alike by neighbour and by Church.

This is the tradition that has established the most remarkable mental hospital of today. The village of Gheel has a population of some 20,000 people. The mental hospital itself contains some 150 beds; but the medical superintendent has 4000 patients under his care. This is possible because the patients are boarded out in the homes of the villagers. You may visit these homes, and you will find that the patient not only occupies the "best" room but is treated as an honoured guest, and that the whole village pays homage in social esteem to the family that cares for a patient.

The year 1792 is notable to us for the appearance in medical annals of two great men—Dr. Phillipe Pinel, a Parisian physician, and William Tuke, a prosperous merchant of the city of York.

The year 1792—and the reign of terror had gripped Paris. Social and political institutions were wrecked overnight in the chaotic disturbance of the French Revolution. Besides the tragic drama of the guillotine, the populace of Paris were distracted by a newly acquired right to view the chained lunatics in the large prisons for insane of Bicêtre and Salpêtrière.

The leading citizen of the Committee of Public Safety had many problems in addition to destroying aristocrats and opponents. The Bastille and the whole French prison system had to be reorganized. An obscure physician who was a reader and a scholar had discovered the treatments advocated by the ancient Greek physicians. He talked to his acquaintance so persistently that Couthon persuaded Robespierre that this unknown physician, Dr. Phillipe Pinel, could be recommended to take charge of the Bicêtre lunatic prison. Perhaps Pinel's qualification was the possession of enthusiasms contrary to prerevolutionary traditions.

Pinel entered upon his duties with missionary zeal, and toured his institution with a blacksmith who freed dangerous and raving maniacs from their manacles. In terror-stricken horror the attendants besought him to desist and laid complaints to the Committee of Public Safety.

Couthon was sent to investigate his protégé's activities. "Citizen", exclaimed Couthon to Pinel. "Are you yourself mad that you wish to unchain such beasts?" Pinel, however, succeeded in persuading Couthon and was permitted to practise his ideals, and in three years Bicêtre was transformed. The success was so great that Pinel was appointed in charge of Salpêtrière as well. In Napoleon Bonaparte France discovered not only a great military leader, but a man who had a genius for civil administration; consequently Dr. Phillipe Pinel's work continued unimpeded.

In 1792 William Tuke was persuading the York Society of Friends to raise money in order to build a special place

that would house and treat any of their number who might become afflicted with mental sickness.

William Tuke was a prosperous merchant and an influential man. He was staunch and strong-willed, and despite opposition land was acquired in the environs of York, and in the year 1796 a building was open to receive patients. The building was known as the "Retreat", where the mentally sick must be treated with sympathy and gentleness. William Tuke was impelled to this by the death of Hannah Mills, a friend. She had been admitted to the York Asylum and had received recognized treatment and skills for the malady. However, William Tuke was convinced that the rigorous and harsh treatment, even though generally accepted, had at least hastened her decease. The "Retreat" became an immediate success. Thus it was that a layman founded a new conception of mental treatment in England in the same year that Dr. Phillipe Pinel revolutionized the treatment in French prison asylums.

For a second time mental treatments suffered a recession. Half a century later than Pinel and Tuke, the magnitude of the problem damped early enthusiasms, and apart from isolated communities psychiatry suffered a retrogression. This was so pronounced that in colonial America the harmless and indigent mentally sick were auctioned, along with the paupers, to the bidder undertaking their care at the least cost to the community. The bidder who offered to care for a pauper for half a dollar a week outbid the man who tendered a dollar. The dangerous insane were placed in criminal prisons. Many of the people responsible for this attitude must have been descendants of Quakers who could have possessed the same emotions as William Tuke. This, in fact, may account for a notable revolution that was soon to take place.

When Dorothea Lynde Dix died in 1887 she was eighty-five years of age, and over forty years of her life had been spent in a crusade to obtain better accommodation and treatment for the mentally sick in America, England and Europe. Miss Dix's work was the expression of a resurgence of humanitarianism that was moving the people of her time with a Puritan intensity reminiscent of the spirit that motivated the Pilgrim Fathers.

History tells us that one day Miss Dix visited the local gaol to conduct a class for the female prisoners. She was horrified to find negligence and brutality. Especially was she amazed at the cruel treatment received by many women whose sole crime was that they were mentally sick. In righteous wrath Miss Dix upbraided gaol authorities, citizens of Boston and the Legislature of Massachusetts. No person was so elevated that he could escape a visit from Miss Dix or avoid listening to the story of the pitiable condition of the inmates of East Cambridge gaol. It was inevitable that public opinion should be aroused and that improved conditions should follow. The alleviation of conditions in an unimportant New England gaol about 1850 could not be measured as more than a trivial social incident. However, it proved the inspiration of a remarkable crusade. Miss Dix spent two years travelling over her own State visiting gaols, almshouses and pauper auctions to see if other institutions reproduced the neglect of East Cambridge prison.

What she discovered was that East Cambridge was by comparison something of a model prison. There then followed a campaign in which legislatures and prominent men were bombarded with letters, assailed with memoranda and confronted with irrefutable statistics. The object of the campaign was to force the State to recognize the insane as public charges and to provide special accommodation for them. In Massachusetts, public conscience succeeded in securing the allocation of funds sufficiently generous to build the Worcester State Hospital. For forty years Miss Dix, a frail little lady, waged this war against inhumanity. State by State was canvassed and traversed by this remarkable woman, and in her wake followed plans that resulted in special hospitals for the insane. Near Washington in the District of Columbia is a model hospital for the insane known as Saint Elizabeth's. It is noted for efficient care and treatment of the mentally sick. This hospital was built as the result of Miss Dix's work.

Possibly her greatest effort was an attempt to induce the Federal Government to grant 5,000,000 acres of land to develop institutions throughout America. After intensive campaigning and years of struggle the Bill succeeded in passing the legislature—a Bill designed to provide facilities for the "Wards of the Nation". President Pierce vetoed the Bill and this effort of Miss Dix did not succeed. However, it may be that President Pierce's exercise of the veto is his main claim to a place in history.

Dorothea Lynde Dix was responsible for the erection of some 40 special hospitals for the mentally sick in America and Europe. She died at the age of eighty-five years, having lived to be acclaimed "the most useful and distinguished woman America has yet produced". In the years that followed Dorothea Dix there developed a cult of mental hospital administrators—men who directed large institutions and managed their many activities with notable efficiency.

Industrial activities and methods to ensure reasonable economies were instituted. The leading exponents were remarkable men and were able to maintain considerable clinical activity, too.

Such names as Mercier, Clauston and Rush come to mind. They taught the classification and management of the insane and were regarded as authoritarian. However, generally there was an air of incurability in the attitude towards mental sickness. This probably helped to maintain the public attitude, which was one of stigma and shame.

The next development was ushered in by several famous names—Sigmund Freud, Havelock Ellis, McDougall, Jung and Adler. A new approach to mental sickness was developed, and by the psychoanalysts the public was given a highly glamourized version of neuroses and mental disorders.

It became pleasantly thrilling to discover that numerous everyday feelings and emotions stemmed from slightly sinful origins. It became the province of the polite psychiatric patient to develop abstruse conflicts, and the insane or psychotic was left out. Therefore a dichotomy arose in which the glamour of the psychoneurotic only threw into greater relief the shame of the psychotic. For many years a struggle took place, the psychotics being cared for in institutions by doctors and nurses who laboured, with partial success at times, to induce legislators to expand facilities for care and treatment. Psychiatrists appeared to be irrevocably divided into institutional and private practitioners.

Two important developments occurred to modify the outlook. Clifford Beers became inspired with the need to secure a national and international coordinated approach towards mental hygiene, and succeeded in establishing the International Committee of Mental Hygiene. Dr. Adolf Meyer, of Johns Hopkins University, made popular a biological approach to psychotherapy, whereby the alienist and psychoanalyst could meet on common ground, and whereby the environmental factors were evolved in all types of mental disorder.

There dawned a new era of hope for the patient, an era that promised an intensity of investigation, therapy and research. The sufferer from mental maladies was subjected to a microscopic examination, as it were, of his biological and psychological functions, and a painstaking collection and collation of environmental data were necessary to provide a complete picture of a person expressing his complaint in symptoms indicative of deep mental conflicts and responding to social stimuli and interactions.

The patient has now become the central theme of psychiatry as, in truth, he has been through all history, although we have seen that this concept of the patient as the central theme was clouded by concepts of his disease and at other times by ideas of treatment and accommodation.

Today psychiatry must understand this person, this patient, this human being, and it must aim to have this man understand himself, and its ambition must be to have society understand its human components.

Shakespeare, with his acknowledged insight, says:

> Men at some time are masters of their fates,
> The fault, dear Brutus, is not in our stars,
> But in ourselves, that we are underlings.

Samuel Langhorne Clemens (Mark Twain), in his own quaint humour, says:

> All I need to know is that man is a human being. That is enough for me; he can't be any worse.

Again he writes:

> Man is the only animal that blushes—or needs to.

He recognizes a creature that on many occasions is motivated by his feelings and emotions. Mark Twain's wit also prompted him to say:

> Man was made at the end of a week's work when God was tired.

A very great truth is embodied in this saying by Dr. Johnson:

> There is nothing too little for so little a creature as man. It is by studying little things that we attain the great art of having as little misery and as much happiness as possible.

It is, nevertheless, for us to answer the question: "Who is man?"

I was privileged to participate in the seminar on "Mental Health in Childhood" recently held in Sydney and conducted under the auspices of the World Health Organization and the Government of the Commonwealth of Australia. I could not help but be impressed with the fact that all therapeutic practice and attitude can meet on a common ground—namely, the importance of the formative years of early childhood. All disciplines can agree that influences occurring in the pre-school years may be calculated to affect the direction of emotional development.

The seminar at least emphasized that man is a creature that has been born.

Man has been born. He has therefore been subjected to all the developmental hazards of embryological growth. During pre-natal life phases of maturation may be arrested or modified by physiological variables, by the action of a virus, as well as by inherent racial potentials. Psychiatry must, therefore, take a more than passing interest in pre-natal pædiatrics.

After birth we find man a creature endowed with potentials in respect to physique and intellectual capacity. In infancy he is nursed and nurtured through babyhood. Mental and physical powers gradually replace total helplessness. He experiences maternal attachment, he has known reactions to father, to brother, to sister; he has known the joys of parental approbation and the disappointments of parental disapproval; he has attended school to be praised and blamed by teachers; he has competed with other children; he has been taught at home and at school the prescriptions of social behaviour. He has gained some understanding of his community's attitude towards religion; he has learnt to play and to work; and he has learnt to establish a home patterned on his childhood memories.

He becomes a man of many experiences—a man who has had difficulties in adjusting racial and instinctive urges to the demands of an artificial society.

As man passes on through life his progress may be traced through several epochs of development: first, infancy to pre-school childhood and later to a childhood conditioned by school and home; then the epoch of adolescence with its conflicts of adjustment; by adulthood, urges struggling for expression against the hampering tangles of childish attachments and socio-economic restrictions. Comes the epoch of adulthood, when independence and responsibility are either cherished or feared, to be followed by the epoch of complete adulthood with its dream fulfilments or its frustrations and compromises. Then comes the eventide of life—man's last epoch—when physical and mental faculties wane and he looks back on years that might have been lived in another fashion, or he feels a sense of achievement that enables him to succeed to old age with grace and happiness.

To live successfully is to experience each day as moments of happiness—that inward feeling that allays the restless spirit of anxious doubt—that feeling that radiates to others and comforts their fears by its warmth of security.

Our mode of life must be studied and practised. There is an art in living. Carlyle says: "Our main business is not to see what lies dimly at a distance, but to do what lies clearly at hand."

Sir William Osler delivered an address to Yale students entitled "A Way of Life". I will quote a passage from his advice to the medical students of Yale University.

> The workers in Christ's vineyard were hired by the day; only for this day are we to ask for our daily bread, and we are expressly bidden to take no thought for the morrow. To the modern world these commands have an Oriental savour, counsels of perfection akin to certain of the Beatitudes, stimuli to aspiration, not to action. I am prepared on the contrary to urge the literal acceptance of the advice, not in the mood of St. James—"Go to now, ye that say, Today or tomorrow we will go into such a city, and continue there a year, and buy and sell and get gain; whereas ye know not what shall be on the morrow"; not in the Epicurean spirit of Omar with his "jug of wine and thou", but in the modernist spirit, as a way of life, a habit, a strong enchantment at once against the mysticism of the East and the pessimism that too easily besets us. Change that hard saying "sufficient unto the day is the evil thereof", into "the goodness thereof", since the chief worries of life arise from the foolish habit of looking before and after. As a patient with double vision from some transient unequal action of the muscles of the eye finds magical relief from well-adjusted glasses, so, returning to the clear binocular vision of today, the over-anxious student finds peace when he looks neither backward to the past nor forward to the future.

Peace of mind; tranquillity of soul; the art of living. How are we as a community faring in our efforts to attain this way of life? From time to time our social groups are attacked by epidemics of disease, and epidemics of emotional unrest. The latter on occasions finds expression in journalistic fashion by articles in the Press decrying the efforts made to cure and comfort the mentally sick. Governments may be blamed, administrators may be blamed and something different is claimed to be the remedy for all ills and inefficiencies. Change the system—change this and change that, is the customary theme. Change. Let us not be wedded to tradition so that we can in no wise advance, but let us not develop a panic reaction and uproot all that is good merely because it is founded on the past. Change may be an illusion; but where change is progress let us marshal our forces, steel our courage, and advance.

We must seek courage in our leaders, and if we are lacking somewhat in this virtue ourselves, let not our sense of inferiority tempt us to claim openly that intelligence or wealth or popularity is superior to courage. Of course, courage must be combined with intelligence. As Lord Elton says:

> No community can prosper if it lacks powerful intelligence. Only, if the community is indeed to prosper, they must be wedded to character and experience. Intelligence divorced from character and experience, intelligence in a partial vacuum becomes a prey to numerous maladies.

Professor Walter Murdoch warns us not to exaggerate the harm the "highbrow" may do, for he is well known and easily recognized and moreover is few in number. But in our democracy we must beware of the "lowbrow", who may be in high places and with an air of intelligence he does not possess lead us into errors.

A great deal has been accomplished in the treatment of the mentally sick. There is no need for us to feel embarrassed by criticisms. On the other hand, there is no place for smug complacency when we meet constructive criticism.

Let us review our achievements in relation to the various epochs of human life.

Pre-natal Pædiatrics.

Bowlby draws attention to two important findings; firstly:

> Harmful changes in the environment before birth may cause faults of growth and development exactly like those which have in the past been thought to be due to heredity.

There is considerable evidence to lead us to think that the ætiology of Mongolism belongs here. Of course hereditary influences still exist, but they are not the whole story.

Secondly:

> A far-reaching biological principle also stems from the discovery that the harmful effects on the unborn young animal or child of intoxication, infection and other damage vary not only with the nature of the injury and the structure and function of the tissue mainly attacked, but also with the maturity of that tissue.

It is of satisfaction to us all that the discovery of the possible effects of the virus of rubella on the unborn infant was made by one of our surgeons.

The Institute of Child Health in Sydney is performing a grand service for Australia; but it should have its counterpart in other centres with similar university affiliations.

The Pre-school Epoch.

For many years the pre-school epoch has been the province of the obstetrician and the pædiatrician. Established in all hospitals are special clinics, and through our community are special centres concerned with maternal and child welfare. The contribution these organizations make to the betterment of our people is very great indeed. Psychologists have entered this field of endeavour, and there are a number of schools and centres to mark their work.

The complexity of the human personality has made observations on this epoch of human life of paramount importance. We find the pædiatrician, the psychologist, the obstetrician, the educationalist, the nurse, the social worker, spiritual leaders, the psychiatrist and the social anthropologist all deeply concerned with this epoch. Here we have a multiplicity of disciplines learning to know each other and by so doing discovering more and more about humanity. Much has been accomplished of which we can be proud.

Recent researches indicate that thought should be given to the placing of children in institutions. It is not an achievement to provide an institution or a residential centre, as it may well be that the detrimental effects of a bad home are less than those of a good institution.

We have established child guidance centres for diagnosis and counselling. We have excellent organizations for the assessment of educational potentialities. However, there is a great deal left to be done before we can feel we have given to the physically handicapped child and the mentally handicapped child opportunities to which they are undoubtedly entitled. In passing, I would make a particular plea for the partially handicapped child—the child whom we force to compete with normally equipped contemporaries.

The Epochs of Adolescence and of Adulthood.

The epoch of adolescence is of extreme importance to society, for it is here that the difficult adjustments of earlier epochs are likely to flower into success or into degrees of failure resulting in delinquency or even psychoses. Admittedly, society recognizes that problems of social adjustment associated with adolescence do exist, and we are witnessing a quiet revolution taking place—the advent of psychiatry into the work of lawyers and judges. Someone has said: "The question is whether the figure of Justice is adequately equipped with merely the sword and scales, and whether it is time to remove the bandages from her eyes?"

The crowded state of our prisons shows that in measuring the success of our penal system there is much still to be achieved. The blind and unseeing methods of punishment by which society seeks to protect itself have little claim to morality and little claim to science. It is to be regretted that psychiatry and psychology have not a complete remedial system to offer. It must be apparent to everyone that remedial treatment will be effected only by years of study and research. Psychiatry is not asking to administer the prisons, but is saying that each criminal and psychopath held in our prisons should have the fullest possible investigation.

In this epoch of adolescence and in the later adult epochs man is subjected to physical and psychological stresses which may produce serious reactions. Our present society is equipped with efficient psychotherapists who have a number of therapeutic weapons at their disposal. Our hospitals and universities are becoming more psychologically minded towards medicine. In the past decade or two remedial equipment has been augmented by the convulsive therapy of Meduna, the electrotherapy of Corletti, the prolonged insulin treatment instituted by Sakel. New pharmacological and bacteriostatic agents have been made available to promote rest, to relieve anxiety and to allay the effects of certain neurological degenerations. Patients who at one time had to be regarded with pessimism may now be expected to recover.

Neuropathology and clinical neurology have made their contributions, enabling the surgeon to undertake successfully operations such as leucotomy, lobotomy, topectomy and thalamectomy, designed to relieve a patient from the torments of exaggerated emotions.

Psychosomatic medicine contributes more and more each day to the total of knowledge of many conditions in which the physical symptomatology is closely related to degrees of anxiety and emotional disturbance.

In the majority of our communities elaborate organizations exist to cater for the psychotic patient, and in only a relatively few cases have effective measures been taken to cater for the neurotic and psychoneurotic. To a certain extent it appears that a person must reach such a degree of confirmed mental infirmity that favourable prognosis is endangered before the resources of the community are available.

There is a trend for these organizations to reach out into the community so that sufferers may participate in therapy at a time more favourable to their recovery. When these services are effectively developed, it will probably be found that they will reach a type of patient not treated before, and in consequence years will elapse before the prophylactic results of this trend will be realized.

For the investigation of mental troubles we, as psychiatrists, are becoming more and more aware of the valuable and indispensable service that can be rendered by ancillary services: the social service officer who is able to present data that would otherwise be unavailable, and to ease the attendant difficulties of social rehabilitation; the occupational therapist, who is able to stimulate the patient to make his first progressive steps towards recovery; the psychiatric nurse, who usually provides the maximum of the environment at a most critical period of the patient's illness—the psychiatric nurse whom we expect to possess all skills of nursing and the virtues of experience and psychological understanding. I commend these services to this Association as necessary to efficient therapy.

Old Age.

We come to the final epoch of life, old age. I believe that we can acknowledge that we are aware of the growing and tremendous problem presented by the old folk whose eventide of life has been complicated by mental enfeeblement. This problem is pressing and urgent. It is more than this Association can solve; but its extent and implications will be fully understood only if we as an organization, and if we as individuals, become urgent and importunate in our efforts. There is the need to develop a special service for those folk who, having rendered many years of faithful service to the community, are because of failing mental faculties and physical powers dependent on others. It is a special branch of geriatric and psychiatric medicine.

Synergistic Psychiatry.

Some years ago Burgi enunciated a theory that certain combinations of two or more therapeutic substances of differing but related pharmacological action increased the individual effectiveness of each. This is the synergistic theory of Burgi.

Synergistic psychiatry is the title of this address. I pray that it will be more than a title—that it will be the spirit that pervades this Association. I believe that the Australasian Association of Psychiatrists can be the coordinating medium whereby each valuable and estimable therapeutic agent and attitude will be united with others having the same aim—namely, the cure of a patient.

Conclusion.

I would specifically commend as practical exercises in the rationale of synergistic psychiatry four tasks: (i) the care of the aged and senile; (ii) the development of an efficient and coordinated system of training and experience for psychiatric nurses; (iii) the training of psychiatrists—the question of psychological medicine at undergraduate and post-graduate levels; (iv) the encouragement of research by this Association with the whole of its combined and individual strength, thus to prove that Virgil was correct when he said: "Happy he who has been able to learn the causes of things."

DETERGENT INHALATION THERAPY.

By M. Hamilton Smith, M.B., B.S.,
and
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The inhalation used was sterile 2% triethanolamine oleate solution (derived from olive oil) in distilled water.

The apparatus and method used are as follows. An oxygen cylinder, with flow meter, is attached to a "Perfix" inhaler. This inhaler has a glass container which holds approximately half an ounce of detergent when three-quarters full, and is held vertically during treatment. The oxygen is turned on at five litres per minute, and a fine mist-like spray is produced through a mouth-piece which is inserted into the mouth, and the lips are closed.

The patient inhales as deeply as possible and at the normal rate of breathing (faster breathing produces giddiness).

Inhalations are given for ten minutes approximately every one and a half to two hours (six times daily). Suitable patients are those with tenacious or loose phlegm of a moderately large to copious daily amount. The ideal patient is the chronic bronchitic with emphysema, copious sputum and cyanosis, with or without mental confusion.

The first subjective improvement is the ease with which the phlegm is now coughed up, and this occurs within twenty-four to forty-eight hours. The daily amount of phlegm is increased for a few days to a week and thereafter tends to decrease. Purulent phlegm tends to become mucoid in character.

The sallow colour of the patient with a chronic chest disease changes in most cases to a healthier pink, probably owing to an increased aerating surface and not to oxygen. (Oxygen therapy and expectorants have been tried many times on the same patient over the years, without the same effect.) Breathing is freer, and greater chest comfort is admitted.

Spontaneous comments have been made that the distressing unproductive morning cough going on to vomiting ceases, and for the first time for years a cough-free night occurs.

Therapy has been continued for an average of four to six weeks, for trial, and some patients have remained out of hospital for longer periods than formerly.

No side effects have been noticed, except some dryness of the throat if drops form instead of spray at flow meter rates over five litres per minute. No lipoid appearances have been seen on radiological examination.

Acknowledgements.

Our thanks are due to the Chairman of the Repatriation Commission for permission to publish this paper, to doctors at this hospital and elsewhere who have given the treatment a trial on their own patients, and to the makers of "Perfix" inhalers.

Reports of Cases.

ŒDEMA AND MAMMARY HYPERTROPHY: A TOXIC EFFECT OF DIGITALIS LEAF.

By W. L. Calov and H. M. Whyte,[1]
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The common toxic effects of digitalis are malaise, headache and nausea. Less commonly there occur vomiting, diarrhœa, cardiac arrhythmia and visual disturbances. Rarely there are cerebral effects such as confusion, delirium, impairment of memory and temporary aphasia, neuralgic pains, paræsthesiæ and, in one recorded instance, allergic skin eruptions (Movitt, 1949). An unusual complication reported recently is gynæcomastia in elderly male patients (Le Winn, 1953).

We record here the occurrence in a female patient of generalized œdema of the body and hypertrophy of the mammary glands apparently due to powdered digitalis leaf.

Clinical Record.

The patient is a retired nurse with a long history of symptoms due to neurosis and hypertensive heart disease. Both parents died from hypertension. The patient had an appendicectomy at the age of twenty-five years and, soon afterwards, a stillborn infant, a miscarriage and puerperal sepsis. Later she was treated for a duodenal ulcer. She is separated from her husband and lives alone.

She first attended this hospital in 1939 at the age of forty-eight years, complaining of palpitations, breathlessness and pain in the chest and left arm when she exerted herself, a feeling as though her heart would burst at times and a hissing noise in her head. A diffusely enlarged thyroid gland was found and a blood pressure of 200 millimetres of mercury, systolic, and 110 millimetres, diastolic. X-ray examination showed the heart to be of normal size, and the report on the electrocardiogram was: "Left ventricular preponderance: early myocardial degeneration."

During the next eleven years she attended the hospital regularly without much change in her symptoms or signs. The menopause occurred in 1945. Anæmia was found on occasions, the lowest recorded hæmoglobin value being 10·5 grammes per 100 millilitres of blood. The treatment given at various times included restriction of diet, reduction of salt intake, and the administration of barbiturate drugs, iron, thyroid extract, sulphocyanate, stilbœstrol and digitalis.

Digitalis was given first in 1940 as a tincture for a period of eighteen months without any ill effects being recorded. In 1942 tablets of digitalis folium were prescribed at one visit; but no further mention of them or their effect was made. In 1945 she took digitalis tablets for five weeks, but complained of restlessness and of swelling of her fingers and feet. These symptoms decreased after

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the digitalis was stopped, and she says that the physician told her never to take digitalis "because it poisons you".

After attending a private doctor for two years she returned to this hospital in 1952. She complained of exhaustion, shortness of breath, increasing weight, swelling of the legs and arms, headache and nocturia. The heart was enlarged, the jugular venous pressure was raised, the blood pressure was 200 millimetres of mercury, systolic, and 120 millimetres, diastolic, the liver was enlarged and there was œdema at the ankles. The urine was normal. She was not having treatment of any sort. She was advised to reduce her weight and restrict her consumption of salt and she was given digitalis tablets, 1·5 grains, to be taken three times a day.

Within two or three days unusual signs began to appear and were very pronounced when she was examined a fortnight later. Swelling had begun in her legs and had spread to involve the groins, the labia, the abdominal wall, the buttocks, across the back of the shoulders, the breasts and the arms. The swelling was least evident in the legs and gave rise to patchy blubber-like areas of heavy, pendulous, œdematous tissue, which pitted but little on pressure, was not discoloured and was slightly itchy in some places. Her breasts were swollen, tight and tender, with prominent vessels and enlarged, hard, lumpy glandular tissue. Apart from the swelling of her breasts during pregnancy she had never before had symptoms resembling these. She stopped taking digitalis and the symptoms subsided in two days. A week later she agreed to try digitalis again. The same effects began next day and became so distressing that she stopped the tablets after taking them for only one week.

One year later, in 1953, she was admitted to hospital for treatment of her hypertensive heart failure. She was given mersalyl injections and digoxin by mouth, 0·25 milligramme four times daily at first. Her condition improved rapidly and she had no untoward reactions. She has remained well for six months while taking digoxin.

Discussion.

Digitalis has not been reported as causing œdema, though it has been shown to have a small effect on the distribution of fluid within the body in non-cardiac male patients (Aikawa, Knight and Tyor, 1951) and in dogs (Handley and Telford, 1947). Mammary hypertrophy as an effect of digitalis therapy has been reported as occurring only in males. Le Winn observed it in 14 patients, all between the ages of fifty-three and seventy-seven years, who had been having digitoxin, lanatosid C or powdered digitalis leaf for periods of weeks or months. He attributed it to an œstrogen-like effect of the digitalis steroids or their metabolites, perhaps accentuated by any hepatic dysfunction which might be present and by the relative lack of androgens in older males.

An œstrogenic substance could conceivably cause the effects observed in our patient. Œstrogens cause the breasts to enlarge and fluid to be retained within the body (Salter, 1952). The most striking example of œdema produced by these steroids is the swelling of circumanal and circumgenital sexual skin of monkeys (Aykroyd and Zuckerman, 1938-1939). The increase in interstitial fluid in these animals is accompanied by swelling of the connective tissue cells, which probably accounts for the observation that the swollen tissue does not pit with pressure to the same extent as the ordinary œdema of cardiac failure. Resistance to pitting was a feature of the œdema in our patient. Œstrogens are thought to act directly on the tissue cells in the monkey, a theory which led, no doubt, to the commercial venture related by Salter of incorporating œstradiol in face cream for the purpose of producing swelling of the tissue sufficient to obliterate wrinkles.

Digitalis tablets are composed of the crushed leaves of *Digitalis purpurea* and contain three pharmacologically active glycosides, which owe their activity to the aglycones digitoxin, gitoxin, and gitalin. Digoxin, on the other hand, is a crystalline glycoside derived from *Digitalis lanata* and contains the aglycone digoxigenin. The aglycones resemble one another and the steroid hormones in possessing the cyclopentenophenanthrene nucleus as the basis of their chemical structure. The similarity between œstrogens and one of the active elements in digitalis is shown in the accompanying diagram (Figure I). It is not difficult to imagine that these substances or their breakdown products may have a similarity of action in some patients, or that transformations from one to the other type of compound may occur at some stage in the growth of the leaves, during the processing of the tablets or during metabolism of the drug in the body.

It is not possible for us to establish the origin or exact nature of the chemical substance which caused these reactions in our patient; but as she was not taking œstrogens or any other drugs it seems reasonable to attribute them to the tablets of digitalis leaf. Furthermore, since other patients experienced the normal effects of digitalis and none of these unusual symptoms when given tablets of the same batch, we can assume the reaction is peculiar to this patient. It is possible that the toxic effects she had eight years ago were of the same but much milder nature, and that the post-menopausal state has made her more susceptible to the drug just as it commonly does with cortisone. Fortunately her sensitivity does not extend to digoxin.

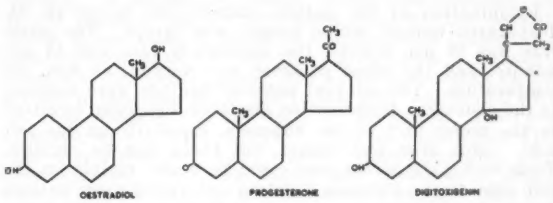

FIGURE I.

This is an unusual toxic effect of digitalis, but one which is not unexpected in view of the reported occurrence of gynæcomastia. It would be interesting to know whether it occurs more frequently than is realized.

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VOLVULUS OF THE JEJUNUM OCCURRING IN BOWEL WITH A NORMAL MESENTERY: A REPORT OF TWO CASES.

By THOMAS F. ROSE.

(From the Department of Surgery, the Royal North Shore Hospital of Sydney.)

IN the past ten years at the Royal North Shore Hospital of Sydney there have occurred 33 cases of volvulus of the small bowel in which the mesentery was normal. In 29 of these the volvulus involved a segment of ileum, in one almost all the small bowel, and in two the upper part of the jejunum.

These two cases of jejunal volvulus are the subject of this report because of their rarity.

In each of these two cases a predisposition to volvulus was present in the form of a single, thick, band-like adhesion between the antemesenteric border of the apex of the involved loop of bowel and the posterior abdominal wall. No other adhesions were present, there being no evidence of previous peritonitis; nor had any abdominal operations been performed. Such adhesions are said to be of developmental origin, but actually their cause is unknown. In neither of these two cases was there any evidence of an exciting cause for the volvulus.

Case I.

This patient was a married woman, aged thirty years, who had a child aged four years. She had always been well until the illness now reported, when she was admitted to hospital with a history of recurrent severe abdominal colic for the previous twelve hours. Each attack of pain commenced in the epigastrium and radiated to the left hypochondrium and down to the left iliac fossa. Each was accompanied by the copious vomiting of bile-stained fluid and audible borborygmi. At first occurring each hour or so and lasting a few minutes only, the attacks of pain were almost continuous on her admission to hospital and were becoming much more severe and acute. During this period the patient was completely constipated.

Examination of the patient showed her to be an ill, dehydrated woman, whose tongue was furred. The pulse rate was 90 per minute, the respiratory rate was 16 per minute, and the blood pressure was normal, as was the temperature. The relevant physical findings were confined to the abdomen. Examination disclosed distension localized to the upper part of the abdomen, especially on the left side. This area was tender, but there was no rigidity. With each pain borborygmi could be heard, mainly on the left side of the abdomen. Pelvic and rectal examinations revealed only tenderness on the left side. A plain radiograph of the abdomen, taken with the patient in the erect position, showed three fluid levels below the left costal margin. When the patient was radiologically examined in the supine position, dilated small bowel was seen to occupy the left side of the abdomen.

Operation revealed a volvulus of a loop of the upper part of the jejunum. This loop had twisted 360° in an anticlockwise direction. A firm, thick adhesion bound the antemesenteric border of the apex of the loop to the posterior abdominal wall on the left side. Though the involved bowel and mesentery were swollen and infiltrated with blood and there was much blood-stained fluid in the abdominal cavity, the bowel was still viable. Proximal to the lesion the gut was very dilated, whereas distal to it it was deflated. The adhesion was divided and the volvulus was untwisted.

Convalescence was uneventful.

Case II.

This patient was a male, aged thirty-four years, who had never had any previous illnesses or operations. For the twenty-four hours prior to his admission to hospital he had suffered from recurrent attacks of generalized colicky abdominal pain radiating to the left side of the abdomen. Each attack of pain was followed by copious vomiting. At first of hourly occurrence, these attacks were occurring every few minutes on his admission to hospital and were increasing in severity. They were now almost continuous and were very severe. During this time the patient was constipated.

Examination of the abdomen disclosed some distension localized to the left side. This became more tense with each pain, and the tense area was resonant to percussion. Tenderness was elicited all over the left side of the abdomen, but there was no rigidity. A rectal examination disclosed no abnormal findings.

The operative findings were essentially the same as in Case I, as also was the treatment.

Convalescence was uneventful.

Discussion.

Both these cases on the patients' admission to hospital were correctly diagnosed as a high small bowel obstruction because of the early copious vomiting. The pain distribution, too, was that found in jejunal lesions. Though the tenderness caused strangulation of the bowel to be suspected, the exact cause was not diagnosed until operation. It is easy to be wise after the event, but the site of the distension together with the rest of the clinical picture really revealed the diagnosis.

It is often stated that in volvulus of the small bowel the onset is very acute, and without previous premonitory subacute attacks. However, both these cases commenced in a subacute fashion with the volvulus twisting slowly (and possibly undergoing temporary untwisting too) until finally the condition became acute as the volvulus twisted tighter. This explains why the bowel was still viable after twelve hours in Case I and twenty-four hours in Case II.

Neither patient had any evidence of shock, which is often a prominent part of the clinical picture of small bowel volvulus, and begins acutely, especially in infants and old people.

The treatment of this type of volvulus is simply to divide the adhesion and untwist the volvulus. Resection must be performed if the bowel is no longer viable.

As the predisposing factor to volvulus, the adhesion, has been divided, no further similar attacks should occur.

Summary.

The histories of two patients with volvulus of a jejunal loop are described. In each instance the mesentery was normal, but there was a predisposing cause, a band between the loop of involved bowel and the posterior abdominal wall.

PERFORATION OF THE INTESTINE BY INGESTED FOREIGN BODIES.

By H. Donough O'Brien,
Surgeon Superintendent, Public Hospital, Burnie, Tasmania.

Perforation of the intestine by ingested foreign bodies is not as common an occurrence as might be supposed. Ward-McQuaid (1952) reported six cases collected from the records of the Radcliffe Infirmary, Oxford, in the previous ten years, and Travers (1949) reported one case and asked for the experience of other surgeons in this condition. This request was followed by a small number of isolated case reports in the correspondence on the subject. McManus (1941) analysed a series of 93 intestinal perforations by a variety of ingested foreign bodies. It is not the purpose of the present communication to analyse previously recorded cases, but to report two new instances of this condition, in the hope of emphasizing the need to be aware of the possibility that this lesion may be the cause of what may otherwise appear to be unexplained peritonitis.

Case I.

X, aged thirty-nine years, a warrant officer in the Australian Regular Army, was referred to the Burnie Public Hospital on October 30, 1951, with the diagnosis of acute appendicitis. He complained of right-sided lower abdominal pain present for four days, which was growing worse and at times travelling right across the abdomen. It hurt him to straighten his body and he had vomited once, on the day of his admission to hospital. His bowels moved more freely than usual. There had been no previous attacks, and there was no relevant history of previous illness. His general health was excellent.

On examination of the patient the pulse rate was 84 per minute; the tongue was moist and coated; the abdomen was mobile and soft, but there was an area of acute localized tenderness in the right iliac fossa.

A confident diagnosis of mild acute appendicitis was made and immediate operation was advised and accepted. Under general anæsthesia (Dr. J. McGrath) the abdomen was opened through a McBurney incision. The caecum and appendix were easily delivered, but the appendix was found to be normal. It was removed and a routine search for further pathological conditions was carried out. This revealed a small, hard mass in the mesenteric border of the terminal portion of the ileum, and on palpation of this a sharp spike was felt, which proved to be a piece of fish bone. An incision was made in the ante-mesenteric border of the gut, and the bone was removed, the incision being closed with a pursestring suture. The abdomen was closed without drainage. In the immediate post-operative period the patient was given penicillin, 150,000 units twice daily, and sulphaguanidine, 3·0 grammes four-hourly, with fluids only. On the second day after operation the patient was well and had passed flatus. He was therefore allowed up and on the fifth post-operative day he was allowed home, with instructions to return in two days for removal of sutures. On November 7, one week after his admission to hospital, the skin suture was removed and he was discharged, his wound healed, with a recommendation to rest for seven days.

Comment.

This appears to be the usual type of perforation and no trouble should be encountered provided that, the appendix having been found to be normal, a routine search for other possible pathological conditions is carried out. The second case to be reported is of a less usual type and presented a good deal more difficulty, which might have been avoided if the possibility of perforation by a foreign body had been borne in mind.

Case II.

Y, aged forty-seven years, a farmer, was admitted to the Burnie Public Hospital at 11.30 a.m. on June 26, 1952, complaining of severe lower abdominal pain, which had begun suddenly three hours previously. For the past eight or nine years he had suffered from constipation, and during the last three or four years he had had intermittent dyspepsia, with occasional vomiting after meals. Three days prior to his admission to hospital he had experienced an acute pain in the perineum, which had recovered spontaneously in a short time, and he was well until after breakfast on the day of his admission to hospital, when he was suddenly stricken with intense lower abdominal pain and nearly collapsed. He managed to make his way home and then vomited once.

On examination the patient was of good physique and obviously in great pain. The temperature was 98·4° F. and the pulse rate 80 per minute. The blood pressure was 120 millimetres of mercury, systolic, and 85 millimetres, diastolic. The abdomen was scaphoid and immobile, and board-like rigidity was present. The epigastrium was tympanitic, and there was diminished liver dulness on percussion. No abnormality was detected on examination of the perineum, but on rectal examination there was considerable tenderness in the pouch of Douglas.

A diagnosis of perforated peptic ulcer was made and immediate operation was carried out. Under general anæsthesia (Dr. J. McGrath) the abdomen was opened through an upper mid-line incision. A small amount of odourless gas escaped when the peritoneal cavity was opened, and some odourless turbid free fluid was found. However, a thorough search of the stomach and duodenum revealed no sign of perforation or ulcer, and the exploration was therefore extended downwards. In the lower part of the abdomen there was more evidence of acute inflammation, but no abnormality was found in the small intestine, caecum or appendix. The large bowel also appeared normal, and there was no evidence of diverticulosis. The pouch of Douglas contained some pus which had a slightly fæcal odour, but palpation of the rectum revealed no abnormality. The operation had by now lasted about one hour, and with the extensive manipulations which had been necessary the patient's condition had deteriorated considerably, so that immediate closure of the abdomen was decided upon. Penicillin-sulphathiazole powder was scattered into the pelvic cavity and the wound was closed with a small drain into the pouch of Douglas. Venoclysis with 4% glucose solution in N/5 saline solution was started, a Ryle's tube was passed into the stomach, and 3·5 millilitres of nikethamide were given intravenously. When the blood pressure reached 125 millimetres of mercury, systolic, and 80 millimetres, diastolic, the patient was returned to the ward, where continuous gastric suction and intravenous alimentation were continued, and penicillin (300,000 units daily) and morphine (one-sixth grain every six hours) were ordered. On the second post-operative day his condition was good and the intravenous drip administration was stopped. He continued to make good progress until the eleventh post-operative day, when he complained of severe central abdominal pain and the temperature rose to 100° F. There were tenderness and guarding in the left iliac fossa, but bowel sounds were heard on auscultation. A diagnosis of pelvic abscess was made and he was put on a course of mixed sulphonamides, 1·0 gramme every four hours. The pyrexia rapidly subsided, but on July 14, eighteen days after his admission to hospital, he looked ill, though he was apyrexial, and his bowels had not opened for five days. Rectal examination revealed what appeared to be a mass of hard fæces, and a rectal drip administration of saline was started, with a view to loosening the impacted scybala. A satisfactory bowel motion was obtained, but it was reported that he had passed some whitish material which it was thought might be due to mucus indicating a pointing pelvic abscess. On July 15, therefore, a sigmoidoscope was cautiously passed, and about four inches up the rectum a fish bone about two inches long was found, with its ends impacted in the walls of the bowel. This was removed with a little difficulty. Further exploration with the sigmoidoscope was clearly contraindicated, but reexamination with the finger now revealed a small, slightly tender mass in the floor of the pelvis. This was clearly a small pelvic abscess, which resolved slowly, and on July 21, twenty-five days after his admission to hospital, he was allowed home, but was followed up in the out-patient department, and on August 14 there was still a little induration of the pelvic floor. A week later he was reported to have been seen loading sacks of potatoes at the wharf.

Summary.

Two cases of perforation of the intestine by ingested foreign bodies are reported. Such accidents appear to be relatively uncommon. The need to be aware of the occurrence of this condition is emphasized.

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Reviews.

Shoulder Lesions. By H. F. Moseley, M.A., D.M., M.Ch. (Oxon.), F.R.C.S. (England and Canada), F.A.C.S.; Second Edition; 1953. New York: Paul B. Hoeber, Incorporated. 10½" × 8", pp. 346, with 216 illustrations and 41 plates in colour. Price: $12.00.

PROFESSOR MOSELEY is to be congratulated on the conception, composition and presentation of his subject, and one must regard this book as a masterpiece which should grace the library of every orthopædic surgeon and traumatic surgeon.

General practitioners, especially those in country towns, will find the book full of interest and information, and post-graduate students in orthopædic surgery will be saved much reading and repetition by studying this volume.

The text is easy to read owing to its large print and excellent spacing. The illustrations are of the highest quality and most lucid in conveying their object, whilst the coloured plates must be seen to be appreciated to their fullest extent.

The subject matter is covered in fifteen chapters commencing with a short one on anatomical considerations, followed by a few pages on examination of the shoulder.

Ruptures of the rotator cuff and the bicipital syndromes are dealt with in detail and in such an efficient manner that one gains the impression that the writer is confident of his claims in that sphere. Chapter five covers calcified deposits in the rotator cuff.

Approximately 100 pages are devoted to fractures, dislocations, and subluxations of the shoulder girdle components, and these are followed by short chapters on fibrositis, the stiff and painful shoulder, operative procedures, and reeducation of the shoulder girdle.

A useful chapter dealing with the differential diagnosis of neurological aspects of shoulder lesions summarizes this rather difficult subject in a masterly manner, and the book ends with a chapter on X-ray diagnosis and treatment by Dr. Jean Bouchard and Dr. C. B. Peirce.

One is impressed by the author's frankness in dealing with controversial subjects, and he shows great wisdom by publishing the views of various exponents, rather than expressing his own opinions in such matters.

Readers will be surprised that the work of Putti and Platt on recurrent dislocation of the shoulder is not referred to in the text or bibliography.

Clinical Diagnosis by Laboratory Methods: A Working Manual of Clinical Pathology. By James Campbell Todd, Ph.B., M.D., Arthur Hawley Sanford, A.M., M.D., and Benjamin B. Wells, M.D., Ph.D.; Twelfth Edition; 1953. Philadelphia and London: W. B. Saunders Company. Melbourne: W. Ramsay (Surgical), Limited. 9¼" x 6¼", pp. 1010, with 946 illustrations, 197 in colour. Price: £4 0s. 9d.

"Clinical Diagnosis by Laboratory Methods", by J. C. Todd, A. H. Sandford and B. B. Wells, now appearing in its twelfth edition, has been known as one of the best working manuals of clinical pathology since its first edition in 1908. In his preface to this edition, Dr. Sanford introduces Dr. Benjamin B. Wells, a new co-author, though indeed Dr. Wells needs no introduction, for his own book, "Clinical Pathology, Application and Interpretation", has already made his name familiar to many medical practitioners. As the twelfth edition follows hard on the eleventh which was a complete revision, with considerable enlargement, there are no very profound changes to be noted. Some new material has been added to the chapter on blood. The chapter on clinical chemistry contains some new material, as is to be expected from the new co-author's interest in this field. The twelfth chapter on bacteriological methods has been rearranged to make it conform to the nomenclature and arrangement of the sixth edition of Bergey's "Manual of Determinative Bacteriology". The chapter on antibiotics has not been changed—a surprising omission, for it sadly needs to be brought up to date. The only antibiotic described is penicillin; the others are merely listed, and modern methods of determining the sensitivity of bacteria to antibiotics are not even mentioned, the only technique described in the chapter being the slide cell method for estimating penicillin in body fluids. The section on serological tests for syphilis has always been very well written; it has been altered and improved so as to conform to the methods published by the United States Public Health Service. On the whole this is an excellent book, as is to be expected since Dr. Sanford is Emeritus Professor of Clinical Pathology, The Mayo Foundation, and a copy of it should be on the shelves of every routine hospital laboratory. The price is not excessive, considering the scope of the book and the many excellent illustrations.

Surgery of Trauma. Edited by Warner F. Bowers, A.B., B.S., M.D., M.S., Ph.D. (Surg.), with forewords by Melvin A. Casberg, M.D., and Surgeons General of the United States Army, the Navy and the Air Force; 1953. Philadelphia: J. B. Lippincott Company. Sydney: Angus and Robertson, Limited. 10" x 7", pp. 630, with 284 illustrations. Price: £8 1s. 3d.

This book is an account of recent American experience in war surgery including the Korean War. It is dedicated to "the Military Surgeons of the Armed Forces of the United States of America and to their civilian compatriots, as well as to the Medical Colleges furnishing the eager and able young doctors who make it possible to offer the highest type of surgical care to the finest young men in the world, the American Fighting Men". It describes American practice and experience, with very little reference to the even more prolonged experience of their allies and ex-enemies.

It is a very good book, as might be expected of one written by specialists dealing with considerable material in their own speciality; it is as up to date as can be, and is packed with practical information. The general surgeon might well be daunted by reading it, because it illustrates strikingly the ever-increasing complexity of modern methods, and the fact that maximum efficiency can be achieved only by caring for a great number of patients in a very narrow field. Perhaps this is best illustrated by wounds of the hand, which were once cared for by general surgeons, later still by one or more of a team of neurosurgeons, orthopædic surgeons and plastic surgeons, but most recently by surgeons who confined their work to hand wounds and at the end of World War II had 12,000 patients under their care in special centres. Such specialism, however, has disadvantages also. Thus the surgeons dealing with abdominal wounds refer us to the section on thoracic wounds for an account of the approach to upper abdominal lesions through the chest, but the thoracic surgeon gives no account of this approach.

It is interesting to note that in dealing with compound fractures of long bones, loose soiled fragments of bone are washed and replaced (but loose fragments in the hand are removed); skeletal traction is favoured for immobilization and the Orr-Trueta method used only during transport; and rigid cortical bone grafts are discarded in favour of cancellous grafts. An interesting change in amputations is the acceptance of forefoot amputations and the emphatic approval of disarticulation through the wrist.

An interesting contradiction is the necessary daily dose of potassium chloride, prescribed as 6 grammes on page 52 and 2·23 grammes on page 246.

Cystostomy for the paralysed bladder is described by the urologist as "the treatment of choice in the military service", but by the spinal-cord surgeons as a harmful method which should no longer have a place "in the rational treatment of an uncomplicated neurogenic bladder".

Perhaps one of the best and most widely applicable pieces of advice is to be found in the section on wound shock, in which it is stated that this should be treated promptly and aggressively, and that failure of response should be looked upon as evidence, not of irreversible shock, but of an undiagnosed complication.

A minor defect is the persistent confusion of the terms "débridement" and "excision", as though they were synonymous.

Peptic Ulcer: Pain Patterns, Diagnosis and Medical Treatment. By Lucian A. Smith, A.B., M.D., M.S. in Medicine, F.A.C.P., and Andrew B. Rivers, M.A., M.D., M.S. in Medicine, F.A.C.P., with a foreword by George B. Eusterman; 1953. New York: Appleton-Century-Crofts, Incorporated. 10" x 7", pp. 596, with 208 illustrations.

One of the most valuable forms of clinical investigation is that which is concerned with the diagnosis and management of a common ailment. When thoughtful, painstaking and experienced observations are applied to the problems of peptic ulcer by members of the Division of Medicine of the Mayo Clinic, one would expect interesting results. Lucian A. Smith and his late co-author, Andrew B. Rivers, of the Mayo Foundation, have presented a book entitled "Peptic Ulcer: Pain Patterns, Diagnosis and Medical Treatment", which comes up to expectations. Very wisely there are contributions on physiology, endoscopy and radiology by Richard R. Ferayorni, Herbert W. Schmidt and C. Allen Good respectively, and the result is an authoritative treatise.

The outstanding feature of the book is the emphasis which is placed on an understanding of pain. A knowledge of the anatomy and physiology of the pathways of painful sensations and differentiation between visceral and somatic pain are of the first importance in appreciating the significance of pain; and of all its manifestations, pain is the most important single factor in the history, diagnosis and management of peptic ulcer. For this reason alone the authors would have justified publication, and although they appreciate that there is still much work to be done before agreement can be reached regarding the exact mechanism of production of pain, they have presented stimulating observations and interpretations which cannot fail to assist those interested academically or clinically in gastro-enterology.

Œsophageal, gastric and duodenal ulcer, ulcer associated with Meckel's diverticulum, gastro-jejunal and gastro-ileal ulcer as well as important complications such as hæmorrhage, obstruction, perforation, penetration and post-operative complications are all considered in detail. Illustrative case histories are interpolated freely throughout and refreshing reference is made to the importance of psychogenic factors in pathology, diagnosis and management.

Although the value of special investigations is adequately considered, the stress throughout is on bedside interrogations, examination and especially the type, situation, radiation and alteration in pain. Laboratory aids are appropriately used as such and water and electrolyte metabolism is well discussed. Treatment occupies a large part (one-fifth) of the volume and is very well described.

Altogether an interesting, informative and very useful book has been produced with excellent illustrations and many references; but regrettably there is very little reference to the work of British gastro-enterologists during the last decade.

Food Inspection Notes: A Handbook for Students. By H. Hill, F.R.San.I., F.S.I.A., A.M.I.S.E., and E. Dodsworth, F.R.San.I., M.S.I.A., M.Inst.P.C.; Fourth Edition; 1953. London: H. K. Lewis and Company, Limited. 7" × 4½", pp. 136. Price: 8s. 6d.

HILL AND DODSWORTH'S "Food Inspection Notes" are evidently proving of considerable service, not only as "a handbook for students", but also for refreshing the memory of the qualified, if we may judge from the appearance of a fourth edition within a period of ten years. As indicated in our reviews of the earlier editions, this excellent little book, which can easily fit into a reasonably capacious pocket, presents a condensation of our knowledge of foods and their inspection, "clearly presented and stripped of all superfluous matter" as the preface says.

For those who have not seen previous editions of this little book, it is advisable to give an indication of its contents. The various aspects of meat inspection, such as the examination of the live animal, slaughtering and the dressing of carcasses, the appearances of the normal and of diseased organs and of parasites, and the examination of meat products such as sausages and tripe, occupy fifty-six pages (nearly half the book). Then follow chapters dealing with poultry, rabbits and game; fish and shellfish; milk and milk products; and miscellaneous foods such as canned foods, beverages, dried fruits, vegetables and eggs. There is a short account of food poisoning and directions for taking samples for analysis.

A handy book such as this should be of considerable service to health inspectors whose duties include the examination of foodstuffs, and even the medical officer of health will find it useful for refreshing his memory. It must be remembered, of course, that the book has been written for English food inspectors. In any Australian edition one would like to see emphasis laid, under "hydatid cysts", on the danger of dogs being allowed access to slaughter houses where they may ingest fertile hydatid cysts in the offal. We are glad to see that onchocerciasis, which is referred to as an Australian disease, is now rarely found in imported meat—one would hardly say that the nodule, or the worm, resembled a "large silkworm chrysalis". We have pleasure again in bringing this useful little volume to the notice of medical officers of health who can draw the attention of their inspectors to it—or give them a copy and keep one themselves.

Medical Jurisprudence. By I. Gordon, M.B., Ch.B. (Cape Town), R. Turner, M.B., Ch.B., D.P.H. (Cape Town), and T. W. Price, Ph.D., M.A., LL.B. (Cantab.), B.A., LL.B. (South Africa); Third Edition; 1953. Edinburgh and London: E. and S. Livingstone, Limited. 10" × 6½", pp. 1000, with 143 illustrations. Price: 75s.

THIS book is the successor to the second edition of "Medical Jurisprudence", by Rhodes, Gordon and Turner, published in 1945. This work has been expanded into a new book with a complete new legal section that represents more than one-third of the volume and would make a valuable book by itself. All the medical aspects of the former edition have been revised and several chapters and many sections have been rewritten and expanded.

The medical section of the book which covers the usual range of subjects dealt with in text-books of forensic medicine is a valuable contribution to medico-legal literature. Particular attention has been given to forensic pathology. Sound principles of modern pathology have been applied to the various forensic problems. This is well exemplified in the discussion in the chapters dealing with anoxia and rapid deaths from anæmic and histotoxic anoxia.

The inexperienced medical practitioner and the lawyer may easily be led astray by reading some of the statements that appear in text-books of forensic medicine. For example, we are told that in ordinary cases the length of time in hours that the body has been dead may be estimated by subtracting the body temperature from 98·4 and dividing the difference by 1½. The inexperienced may be led sadly astray by such rules. But the reader will find no such statements in this book where it is refreshing and stimulating to find a much broader and sounder approach to such problems. In discussing the onset of *rigor mortis et cetera*, the authors state that it is not possible to deduce any safe general rule for the time of onset, duration and disappearance of rigor because of the number and variability of the factors influencing its development. This type of statement has much to commend it.

Some of the statements are open to comment. At page 51 the book states: "In the case of serious crime, such as murder, it is incumbent on the practitioner to give any information to the police which he considers necessary. Thus if a practitioner is called upon to attend a person suffering from shot or stab wounds in circumstances which make it clear that the patient has been criminally assaulted or is a fugitive from justice, he must clearly inform the police." Yet in dealing with criminal abortion at page 739, it is stated that if the woman refuses to cooperate in allowing the police to be informed there is nothing further that should or could be done. In the discussion on drowning, what is meant by the following paragraph? "Frothy fluid which is often tinged with blood is observed in the bronchi, trachea and larynx and may appear about the mouth and nostrils. This condition is due to a generalized emphysema."

The general practitioner and the lawyer will find the legal section of the book most informative. The law as set out is the law of southern Africa. In South Africa, for example, a child is deemed to have been born alive if it is proved to have breathed (page 756). This would not be sufficient to establish legal live birth in this State.

There is a great deal of valuable practical material in this book for both the medical and legal professions, and it should be welcomed by all.

History of the Second World War: United Kingdom Medical Series. Editor-in-Chief, Arthur S. MacNalty, K.C.B., M.A., M.D., F.R.C.P., F.R.C.S. "The Civilian Health and Medical Services", edited by Arthur Salisbury MacNalty, K.C.B., M.A., M.D., F.R.C.P., F.R.C.S. *Volume I:* The Ministry of Health Services; Other Civilian Health and Medical Services; 1953. London: Her Majesty's Stationery Office. 10" × 6½", pp. 452. Price: 45s.

THIS book, in two parts, is a report of the measures taken by the Ministry of Health and other government departments to control the health of the civilian population of England and Wales during the last war. It was appreciated two years before the commencement of war that bombing of civilians would require emergency measures unlike any found necessary previously and plans to be implemented on the declaration of war were formulated then to meet the emergency.

The first part describes the Ministry of Health services. During the first two years of the war (the time taken for the various services to become stabilized) there was deterioration in the state of the public health as shown by the increase in incidence of disease and the infantile and mortality rates. This rise was followed by a progressive fall, commencing in 1942, and the plans which were formulated to bring about this improvement in the health of the people are described. More details could have been given of the difficulties encountered.

Of particular interest are the references to nutrition, especially in regard to pregnant women and children whose good health was maintained because of the physiologically balanced diet they received. The average diet of all classes in the community improved owing to government organization and control, supported by health education.

The British Medical Association as early as 1937 voluntarily compiled a register of medical practitioners and set up emergency committees who were responsible, amongst other things, for the allocation of doctors for service with the Forces and civilian population when war was declared. A scheme was prepared for the protection of practices and regulations were passed giving the scheme the force of law.

Part II describes the medical activities of five other government departments and covers such services as industrial hygiene, food supply and school health services.

The book should be read by Federal and State Planning Committees to assist them in preparing for any future war in which our cities would be attacked from the air, if not from new weapons launched from the sea. Should it be read by persons directing the health policy of Australia they would appreciate that it took a war to make England

realize that the strength of a nation depends on the health of its men, women and children; therefore, a small percentage of the cost of defence spent on preventive medicine during peace will ensure a happier people and a stronger fighting force when war does come.

World Directory of Medical Schools. World Health Organization; 1953. Geneva: World Health Organization. In English and French. 9¼" × 6¼", pp. 220. Price: 25s.

This directory contains information on 500 medical teaching institutions throughout the world. In addition to the name and place of each, the following information is given wherever possible: the year in which the school was founded, details concerning its administration, the length of the academic year, conditions for admission, numbers of full-time and part-time teachers, total enrolment by sex, number of new students admitted annually, language in which instruction is given, total number of years of study required to obtain a degree, degrees obtainable, annual number of graduates, and annual tuition fees. The four Australian medical schools are included. The data were collected through *questionnaires* addressed directly to the institutions themselves. When replies were not forthcoming, information was sought from other sources; in these cases there is no certainty that the information is accurate or up to date. However, the directory should be of use to those who require information about the various medical schools and in particular to those interested in the present-day attempts to coordinate and develop a uniformly high standard in medical education throughout the world.

Medicine for Nurses. By M. Toohey, M.D., M.R.C.P., D.C.H.; 1953. Edinburgh and London: E. and S. Livingstone, Limited. 8¼" × 5½", pp. 604, with 152 illustrations. Price: £1 8s.

Dr. Toohey has written a well-balanced book which, as stated in the preface, "may not only help the nurse during her training, but also serve as a reference book afterwards". The work is therefore comprehensive and written along standard lines. Chapters are devoted to all the infectious diseases and to diseases of each bodily system. Welcome additional chapters are those headed "On Pain and Vomiting", "On Acute Poisoning and Coma" and "Psychosomatic Medicine". This last one could possibly have been extended beyond the brief eleven pages; all the same it gives nurses an insight into what may perhaps be termed a concept of modern medicine. Doubtless before long we shall see a whole text-book of psychosomatic medicine for nurses.

The book contains a well-chosen series of photographs and also poster-like diagrams, each of which has an obvious meaning. The concluding chapter comprises a list of important drugs with essential details about each one; this will let nurses know the composition of the potions and injections that they administer. Any tutor sister can recommend this work to her pupils or use it confidently as a basis for her own lectures.

Stress Incontinence in the Female. By John C. Ullery, M.D., F.A.C.S., F.I.C.S.; 1953. New York: Grune and Stratton, Incorporated. 10" × 7", pp. 168, with 82 illustrations. Price: $6.75.

New vistas of approach to the problem of stress incontinence in the female are opened up by John C. Ullery, of Philadelphia, in this admirable monograph, virtually a review of the whole of the literature on the subject and concluding with a valuable summing up of the views of his own particular school.

After a brief introduction devoted to definitions and the incidence of the various types of stress incontinence, the second chapter proceeds to deal very comprehensively with the embryology and anatomy of the female urogenital tract, the urethra, of course, receiving special consideration. From earliest times the various contributions to our knowledge of the anatomy are chronologically surveyed. The anatomy and physiology of the various concepts of the bladder sphincter mechanisms are very fully discussed, as well as illustrated by simple and informative diagrams. Then follows a chapter on the anatomy, physiology and innervation of continence and the act of micturition, also very detailed in its treatment. All this knowledge, *plus* cystographic confirmation, is necessary if accurate assessment of the ætiological factors is to be made in each particular case.

With regard to the prophylactic treatment of stress incontinence the accent is on good obstetric care, and, by perineal exercises, physiological strengthening of the pelvic supporting tissues and sphincteric muscles. For the established condition the author maintains that, through muscle education and gradual resistive exercises using the perineometer, all patients should have the benefit of non-operative treatment, not only because it may obviate operation, but the better to prepare the patient for surgery if it should prove necessary. The discussion of the surgical treatment constitutes in effect a review of every known operative procedure for this condition. Among those described in detail are the Millin-Read operation, the statistics of which receive favourable comment, and the Marshall-Marchetti technique which is currently receiving wide acclaim in the United States of America and a modification of which the author himself appears to favour. However, to those not intimately concerned with the subject, this description of the multiplicity of techniques might be confusing, particularly as all the operators appear to report "good" results, irrespective of the type of operation performed.

This book will have little appeal to the general practitioner, but to the urologist, and to the gynæcologist and others who endeavour to cure stress incontinence, it will be very stimulating and of inestimable value.

Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"The Chest: A Handbook of Roentgen Diagnosis", by Leo G. Rigler, M.D.; Second Edition; 1954. Chicago: The Year Book Publishers, Incorporated. 8" × 5½", pp. 380, with 338 illustrations. Price: $8.00.

Intended to be an introduction to and outline for the study of X-ray diagnosis of chest diseases.

"The Year Book of Drug Therapy (1953-1954 Year Book Series)", edited by Harry Beckman, M.D.; 1954. Chicago: The Year Book Publishers, Incorporated. 8" × 5½", pp. 538, with 73 illustrations. Price: $6.00.

One of the Practical Medicine Series of Year Books.

"Clinical Medicine in General Practice", edited by John Fry, M.B., B.S., F.R.C.S., with a foreword by Henry Cohen, M.D., D.Sc., LL.D., F.R.C.P.; 1954. London: J. and A. Churchill, Limited. 7¼" × 5", pp. 448. Price: 27s. 6d.

Written by a group of general practitioners from widely differing types of practice, the book is "essentially a clinical study of the common conditions" encountered in general practice.

"Lectures for Nurses", by G. N. Burbidge, S.R.N.; Fifth Edition; 1954. Sydney: Australasian Medical Publishing Company, Limited. 7¼" × 5", pp. 336, with two text figures. Price: 17s. 6d.

The teaching in the book embodies the methods taught in the Royal Melbourne Hospital and the Alfred Hospital.

"History of the Second World War: United Kingdom Medical Series", Editor-in-Chief, Arthur S. MacNalty, K.C.B., M.D., F.R.C.P., F.R.C.S. "Surgery", edited by Zachary Cope, B.A., M.D., M.S., F.R.C.S.; 1953. London: Her Majesty's Stationery Office. 9¼" × 6¼", pp. 792, with 64 illustrations, 23 in colour. Price: 80s.

This volume records the chief advances made during the war of 1939-1945.

"Diseases of Women", by Robert James Crossen, A.B., M.D., F.A.C.S.; Tenth Edition; 1953. St. Louis: The C. V. Mosby Company. Melbourne: W. Ramsay (Surgical), Limited. 10¼" × 7", pp. 948, with 990 illustrations, 41 in colour. Price: £9 14s. 3d.

The book is an attempt to bring to the student the basic facts of gynæcology and to enable the practitioner to apply diagnostic and therapeutic methods made possible by recent advances.

"The Health of the Community: Principles of Public Health for Practitioners and Students", by C. Fraser Brockington, M.A., M.D., D.P.H., B.Chir. (Cantab.), M.R.C.S. (England), L.R.C.P. (London), of the Middle Temple, Barrister at Law, with a foreword by John Stopford, M.D., Sc.D., LL.D., F.R.C.P., F.R.S.; 1954. London: J. and A. Churchill, Limited. 8¼" × 6", pp. 428. Price: 32s.

The purpose of the book is to give an account of the application of medicine to the social group; it is "a study of the principles and practice of epidemiology in its widest sense".

The Medical Journal of Australia

SATURDAY, APRIL 10, 1954.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given: surname of author, initials of author, year, full title of article, name of journal, volume, number of first page of the article. The abbreviations used for the titles of journals are those adopted by the Quarterly Cumulative Index Medicus. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

THE CHILD IN HOSPITAL.

IT is well recognized that security is very important to a young child. Security in this sense has been defined by Bert I. Beverly[1] as "the feeling which is given a child by parents who want a baby and who are satisfied with the one they get; who accept their infant as he is, no alterations seeming to them necessary". It has, he states, been described as a feeling of "all rightness" which the child has in his parents. During early infancy, security lies in mother; she supplies the physiological and emotional needs of the baby. After a few weeks the baby can begin to perceive the protection of father. Security in the whole family and home appears next; it is now "my mother", "my father", "my brother" and "my home". Then follow associates and the community, teachers at school, the church and the nation, and, finally, the child develops self-reliance. Loss of the sense of security, whether or not it has a real basis, can have a devastating effect on a child, even though those effects may not be immediately apparent.

This question of security is an important aspect of the admission of children to hospital. A good deal of thought and discussion has recently been devoted to this situation and its various implications by those who are aware of their importance, but the subject needs much wider and more sympathetic attention from all who have any hand in the admission of children to hospital, in their care as in-patients and in their subsequent return home and readjustment. The important age group appears to be that under five years, the essential harmful situation being separation from the mother or permanent mother-substitute. Details of the response to separation at various ages were described in a combined discussion by A. Jennings, R. MacKeith, A. Peto and J. Williams at the International Seminar on Mental Health in Childhood, held at the University of Sydney in August of last year. It was made clear in that discussion that the greatest mental trauma is suffered by children in their second and third years. At that stage an initial phase of confusion and anxiety may change after a few hours or a few days to despair, the child becoming withdrawn, apathetic and depressed; this may erroneously be interpreted as diminution of the child's distress. Later he may appear to recover and show more interest in his surroundings. He may be able to adopt a mother-substitute or build up some superficial relationship, but at the same time will cease to show much feeling towards his parents during visits. On his return home, readjustment may take place if the relationship in the pre-separation period has been good, but there may be difficulties in the readjustment and various permanent effects. Worse still, with prolonged separation, the state of "frozen emotion" may persist and become irreversible, leading to a character defect when the child is unable to respond to or reciprocate affection, though he may crave it. The fact emerges from the discussion that in the histories of delinquent and disturbed characters who show no apparent ability to love or feel guilt, separation from the mother for a long period in the first years of their lives appears to have been a prime cause for their faulty development.

This present reference to the question of security and separation is prompted by a report appearing in this issue of a symposium held by the Melbourne Pædiatric Society last November; the subject was maternal care with special relationship to the problem of the child in hospital. Much of the discussion centred around a film entitled "A Two Year Old Goes to Hospital". The film is the work of James Robertson, of the Tavistock Clinic, London, where he and others in John Bowlby's unit have for some years been working on the hypothesis that a prerequisite of mental health in later life is the experience of a warm, intimate, continuous relationship to the mother or permanent mother-substitute in the early years of childhood—in other words, the sense of security that we have already mentioned. This viewpoint was explained in an introduction to the film by John Colebatch, who pointed out that the problem tackled by the film was to consider to what extent less severe and less prolonged maternal deprivation could affect the mental or emotional well-being of the growing child and future adult. It is not necessary to comment on the report of the symposium in detail, but it will bear careful reading by all who are concerned with its subject. In particular, attention may be drawn to the remarks, reported at length, of V. L. Collins, Medical Director of the Royal Children's Hospital, Melbourne. Dr. Collins, as an administrator as well as a pædiatrician, may be expected to appreciate hospital administrative problems as well as the needs of the children patients, and it is interesting and encouraging to see his sympathetic approach to questions, such as free visiting by parents, which are sometimes thought of as administratively impracticable. As a matter of fact, the symposium brought out the fact that free visiting by parents is now a well-established practice, not only at the Royal Children's Hos-

[1] In "The Child in Health and Disease", by C. G. Grulee and R. C. Eley, Second Edition, 1952, page 21.

[1] M. J. AUSTRALIA, January 16, 1954.

pital, but also at the Queen Victoria Hospital and at Fairfield Infectious Diseases Hospital, apparently with satisfaction to everybody. This enlightened attitude is, of course, not confined to the Melbourne hospitals mentioned. In a leading article in this journal on February 16, 1952, we referred to the work of Professor Allan Moncrieff and his associates at Great Ormond Street in introducing mothers to an active part in the care of their children within the wards. According to Ronald MacKeith,[1] Guy's Hospital was the first teaching hospital in London to have regular daily visiting of children. Reference to MacKeith's paper brings forward the particularly important subject with which it is primarily concerned, namely, the admission of children into hospital for an operation. It may be remembered that this aspect of the question was also referred to in the leading article already mentioned, but certain points from MacKeith's paper may be mentioned. He states that the three main anxieties which centre round a child's admission to hospital for operation are the separation from home, the anæsthesia and the operation. We have already mentioned the importance of separation, especially to younger children. With regard to anæsthesia, MacKeith states that the fear of losing control as they feel themselves slipping away under the anæsthetic is common in older children, and they sometimes have unexpressed, foolish fears of what will be done while they are under the anæsthetic, sometimes the result of thoughtless remarks by children or adults. Their ideas about operations, including the one they themselves are about to undergo, can be fantastically wide of the mark, and these and other details of hospital experience are sometimes interpreted as punishments for real or imagined naughtiness. Some children are, of course, much less affected than others, and MacKeith emphasizes the importance of letting children set their own standards of self-control, reassuring them where possible about their fears, but accepting those fears and their tears with sympathy, "remembering the therapeutic benefit of a good cry for grief-stricken adults, and remembering also that a temper tantrum is itself a frightening experience for a child, for which he needs to be comforted". The keynote to management of children about to have an operation appears to be the simple principle of straightforward, honest explanation, and the removal, as far as possible, of any element of surprise and confusion. Parents and doctor should combine to help the child to understand the reasons for the operation, to be prepared for what the inside of the hospital is like, and to understand that anæsthesia is intended to prevent pain and will be followed by complete awakening and survival. These things are, of course, not always possible with the younger child, and the view has been put forward strongly that operations should, if possible, be postponed until a child is at least four years of age. An important help for the child is to allow him to bring into hospital some familiar object such as a doll or toy, no matter how shabby it may be. As MacKeith puts it, the familiar object will reassure a child because he knows himself as the owner of the object—and there it is beside him in his bed. For similar reasons, he continues, the child should come back from the theatre to the same bed in the same room as he was in before; otherwise he may worry that his mother will not know where he is. MacKeith discusses the question of the place of the mother in the hospital, with its advantages and disadvantages, but he advocates that the mother should at least stay until the child has had his bath and, if possible, give him the bath herself. Daily visiting he describes as "always wise and humane". He also quotes with approval, and commends to both nurses and mothers, the three things which Anna Freud has said it is important to tell a child in hospital: he is still very much loved; he is not being punished; he is getting better. MacKeith also discusses with some care the question of "telling the child", as it affects parents, doctors and nurses, and he refers to the importance of what not to tell children. This last phrase means more particularly what is untrue or only half-true and tends to undermine the child's confidence. It is summed up in one sentence: "It might 'ring the bells of Heaven' quite loudly if we stopped telling children 'this won't hurt you' just before sticking a needle into them." MacKeith agrees that parents, and especially mothers, need guidance in preparing the child for the experience of being in hospital and suggests that it may be useful to prepare a leaflet for them to read. However, he states, one thing is certain: adults deceive themselves when they dismiss the fact that small children in hospital are often anxious or sad, and that such anxiety often permanently lessens the child's reserves of self-confidence. MacKeith's view is that such adults, in fact, resort to a functional blindness by which they spare themselves awareness of children's suffering.

The title of the leading article in the issue of February 16, 1952, to which we have previously referred was "Even Children are People". That thought should never be lost sight of. It was pointed out at the time that all too often the unhappy situation thrust upon the child admitted to hospital is an indictment of adult stupidity that can be avoided. Not the least of the responsibility rests upon the medical staff of the hospital, and much can be done by the doctor who initially arranges the child's admission to hospital and by the doctor who actually supervises that admission. He can be the key person in ensuring two vitally important things: first, that the child's confidence in its parents and their integrity is not lessened, and second, that unjustified fear of the hospital and of what may happen there is allayed. When the child has been admitted to hospital, the questions arise of visiting and of the mother's participation in the child's care. Despite the favourable attitude taken in the Melbourne and London hospitals already mentioned, quite different views are held by some experienced and sympathetic pædiatricians and administrators; and we should welcome a discussion in our correspondence columns on the current opinions and practice in children's hospitals throughout Australia. However, no matter what the rules may be about visiting and the place of the mother in the ward, the primary responsibility for the child's highest welfare in hospital must rest on the medical and nursing staff. Dr. Collins has dealt with this in some detail in the Melbourne Pædiatric Society symposium, and we need not add to what he has to say; but attention should be drawn to the quotation with which he ended his remarks, and in particular to one sentence: "Let there be no taboo on tenderness."

[1] *Lancet*, October 24, 1953.

Current Comment.

OSTEOARTHRITIS.

In a "Textbook of the Rheumatic Diseases" edited by W. S. C. Copeman and published in 1948 the following revealing sentences open the chapter on osteoarthritis:

> Osteo-arthritis has had many synonyms. For example, the Americans often speak of it as "degenerative joint disease". Other terms commonly used are "hypertrophic arthritis" and "arthritis deformans" (Virchow); but "osteo-arthritis" is probably the best designation, because it implies no belief in any particular ætiology.

Osteoarthritis is defined as "a chronic arthropathy manifesting itself clinically in several ways and thought to be due primarily to degeneration of the articular cartilage". Its cause is frankly acknowledged to be unknown, although it is variously attributed to endocrine dysfunction, arteriosclerosis, either local or general, local aseptic necrosis of the bone or simply aging and microtraumata. The evidence for an infective factor is regarded as small. As a direct corollary to this lack of understanding of osteoarthritis, effective measures have been devised for the treatment of only the advanced stage of the disease; and as M. H. M. Harrison, F. Schajowicz and J. Trueta[1] point out, such treatment usually involves either the total suppression of the affected joint by arthrodesis, or the more or less complete removal inherent to arthroplasty. The vogue acquired by these operations, they comment, proclaims their failure to arrest, and even more to reverse, the progress of the disease before the joint has been completely disorganized, a process which entails prolonged suffering and frustration. In the belief that, as has happened in other conditions, a better understanding of the problems involved might lead to new therapeutic advances, they undertook an investigation of the condition at the Nuffield Orthopædic Centre in Oxford, selecting the hip because it was the commonest clinical site of severe osteoarthritis. The investigation embraced not only the disorganized joint of the final phase of the disease, but the various stages of its evolution from the normal. The material for their investigation consisted of 91 hip joints examined *post mortem*, 45 femoral heads removed at operation from osteoarthritic hips, and radiographs obtained from 80 selected patients suffering from osteoarthritis of the hip, in whom it was possible to follow the progress of the disease over several years. The methods of investigation included not only macroscopic and microscopic examination of the material and radiography, but also investigation of the vascular pattern of the osteoarthritic femoral head by means of special vascular injection and examination techniques. From this study they describe osteoarthritis as a disease which eventually embraces all the tissues of the joint, but begins as a reaction of the juxtachondral blood vessels to a degeneration of the articular cartilage. This reaction results in hyperæmia of the bone. It occasioned some surprise to Harrison, Schajowicz and Trueta to find that daily use preserves rather than "wears out" articular cartilage. Indeed, inadequate use appears to be the commonest cause of cartilage degeneration and ensuing vascular invasion. These investigators consider that the idea of an ætiology based on cartilage-suffering does not exclude, but indeed explains, the osteoarthritis implanted on joints of a normal shape which have been previously affected by acute or chronic inflammation or by hormonal dysfunction, such as acromegalic osteoarthritis. They state that the stimulus to vessel growth and invasion is the same in all these cases—namely, cartilage damage. Once the vessels have entered the cartilage, the bone and marrow of the osteophyte are inevitably laid down. What is so damaging in osteoarthritis seems to be not the degeneration of the cartilage, but the vigorous and persistent attempt at repair, an attempt which aggravates the already disordered function of the joint, not only by osteophyte formation, but by the hypervascularity which weakens the structure of the bone beyond the point at which it can carry its increased load. The collapse that follows provokes further reparative efforts, with the same deplorable results. Harrison, Schajowicz and Trueta sum up their view of the osteoarthritic process (throwing in an effective analogy for good measure) in their statement that the process appears to be an attempt to transform a decaying joint into a useful one, and for this, as in the miraculous rejuvenation depicted in Goethe's *Faust*, a high price must ultimately be paid.

[1] *J. Bone & Joint Surg.*, November, 1953.

THE INEFFECTIVENESS OF AUREOMYCIN FOR PRIMARY ATYPICAL PNEUMONIA.

The assessment of the effectiveness of any form of treatment has many pitfalls, but although this fact is well known, people still fall into them. Every little while a careful investigation brings out some glaring example of confidence falsely reposed in a particular form of therapy. A recent example is a controlled study by Stuart H. Walker[1] of the use of aureomycin in 212 cases of primary atypical pneumonia, from which it is concluded that aureomycin does not influence the course of this disease. In view of the cost of this drug and the widespread faith in its value in this role, this is an important finding. The subjects of the study were 212 patients with primary atypical pneumonia admitted to the infectious disease section of the William Beaumont Army Hospital, during the course of a moderate epidemic of this disease at Fort Bliss, Texas, during the winter and spring of 1951-1952. The patients were chiefly young soldiers in basic training, and all were moderately to severely ill. The important point was that all the cases were from a single epidemic, and a detailed analysis indicates that they were closely comparable. Great care was taken to clarify the diagnosis, to eliminate the possibility of other infections and to avoid fallacies in the comparison of treated and untreated groups. The patients were divided into two groups; one group was treated with aureomycin, 0·5 gramme every six hours until the temperature was normal for two days, or for a minimum of three days, and one group was treated with yellow placebo capsules simulating aureomycin in the same capsule dosage and for the same duration. Selection for treatment was based upon the character of the last digit of the hospital register number. Patients with odd numbers received placebo, those with even numbers received aureomycin. No other antibiotic agents were administered, nor were any antipyretics or analgesics given, except in occasional single doses for control of extreme symptoms. A detailed account of the progress of the disease in the two groups is set out in the paper, with a careful evaluation of the effect of therapy in each case. The similarity of the progress of the disease in general and in detail in the members of the two respective groups is most striking. Evaluation was made of the duration of the major symptom, fever, of the physical and radiological signs of disease and of the incidence of progression, relapse and remission within forty-eight hours of the initiation of therapy. In no case is there any evidence that aureomycin influenced the course of the disease. Commenting on these rather revolutionary findings, Walker states that the early claims that aureomycin was effective in the treatment of primary atypical pneumonia were based upon the observation of what appeared to be, in comparison with the course in previously observed patients treated with penicillin or sulphonamides, an unusually rapid decrease in fever and malaise; and a number of investigators were able to report superior effectiveness of aureomycin in controlled studies. The apparent discrepancy between the conclusions of Walker's study and those of previous investigators would appear to be consequent on two major factors: first, the lack of comparable control patients in the previous studies, which, because of the great variability between epidemics

[1] *Am. J. Med.*, November, 1953.

and in individual patients with primary atypical pneumonia, renders such studies invalid; second, the frequency of essentially spontaneous remissions in this disease. The results of the present study indicate that it is distinctly unusual for progression of a majority of the signs and symptoms of the disease to occur after the patient has been in hospital and that in one-third of untreated patients a considerable remission of fever will occur within forty-eight hours of admission to hospital. These data, Walker suggests, probably indicate the efficacy of bed rest in the treatment of this disease, but they clearly demonstrate, even more, how readily a therapeutic agent may be credited with specific efficacy in an uncontrolled study. Incidentally, Walker states that despite an initial impression that aureomycin was effective in a variety of presumably small-virus diseases, now the only clear evidence of its efficacy in virus infection is in the diseases of the psittacosis-*lymphopathia venereum* group. Neither this statement nor the study of primary atypical pneumonia reflects adversely in any way on its usefulness in the treatment of infections due to other types of organisms.

HALLUCINOGENIC DRUGS.

AMONGST the drugs taken for their euphoriant and phantasy-producing effects *Cannabis indica* or sativa is probably the most widely used, especially in the East in the form of hashish, bhang or ganga, taken orally or smoked. The hemp plant has a wide distribution and grows in both temperate and tropical climates, the active principle, cannabinol, being contained in the resinous juice expressed from leaves, stalks or flowers. The plant grows wild in the coastal areas of New South Wales. Baker-Bates[1] reported the case of a young man in the north of England who grew the plant from parrot seed, and rolled the dried leaves and tops into cigarettes with which he intoxicated both himself and his *fiancée*. Another preparation of cannabis, marihuana, is smoked in cigarettes, "reefers", by perverted juveniles and adults in the United States of America. Bromberg[2] states that two grains of the dried cannabis plant, ingested or smoked, may be sufficient to cause euphoria, motor excitement and hallucinations. Sex desire is usually increased, but not usually potency. Anxiety, apprehensiveness and depression may result in suicide. Amongst the addicts whom Baker-Bates observed there was no aggressive crime, but seduction and theft were possibly committed under the influence of the drug in a few instances. On the other hand, violent homicidal mania in hashish intoxication has been reported from India and other Eastern countries.

Mescaline, the active principle of the cactus *Anhalonium lewinii*, is consumed in the form of mescal buttons and peyote by Central American Indians for the production of euphoric and ecstatic states in religious ceremonies. One of the peculiar effects of mescaline is the sense of infinite prolongation of time. There may also be the feeling that the whole or parts of the body have expanded (Mayer-Gross[3]).

Hallucinogenic drugs have been studied experimentally because of the similarity of their effects and symptoms such as depression, elation, hallucinations, delusions, reduced initiative and feelings of depersonalization or of changed personality which occur in affective, schizophrenic and paranoid psychoses. But while in cross-section a drug intoxication may present schizophrenic features, the whole story is very different and above all the course of a psychosis produced by an hallucinogenic drug is usually brief, a matter of a few hours or days only.

One of the latest drugs to be studied in the production of experimental psychoses is lysergic acid diethylamide (L.S.D.). M. Rinkel *et alii*[1] and H. Gastant *et alii*[2] have described "schizophrenia-like" symptoms after the administration of one gamma per kilo body weight in normal persons. The symptoms include those already described in other toxic psychoses, with perhaps rather more excitation of the autonomic system. It has been suggested that the effects of lysergic acid are more hebephrenic, while mescaline is more catatonic in action. Increase in the α rhythm of from 0·5 to 4·0 cycles per second has also been described in L.S.D. psychosis. No case has so far been reported of the perverted use of L.S.D.

D. McI. Johnson[3] in a short monograph has reviewed the clinical effects of hallucinogenic drugs and more particularly has called attention to the possibility that they might be administered with the criminal intention of having a person removed to a mental hospital. In fact, he records a case of a man to whom he suspected that *Cannabis indica* had been given maliciously who was under certificate for about six weeks with an account of a brief manic episode. In another instance a woman had been in the habit of smoking several "reefers" a day over a period of some months and developed a severe aggressive and paranoid psychosis which lasted at least a month. Dr. Johnson criticizes some aspects of English lunacy administration and urges that no patient with acute mental disorder should be sent direct to a mental hospital without a period of observation in some clinic or observation ward (reception house). Unfortunately, in the absence of a history of addiction, the hallucinogenic drugs cannot be suspected as the cause of severe psychosis of rapid onset, with the possible exception of the solanaceous derivatives (atropine, hyoscyamus, stramonium and scopolamine) which cause dilated pupils and a very dry mouth. Nevertheless there is clearly reason for caution in the disposal of a patient with a psychosis of rapid or sudden onset, especially if a reliable history points to a well-balanced and integrated personality. If, on the other hand, the patient has been taking any of these drugs for their sensual effects, detention for as long as possible in a mental institution would seem a most desirable form of treatment, even though psychotic manifestations are of brief duration. As is well recognized, there are many difficulties in subjecting determined and uncooperative alcoholics and other addicts to adequate control, so that if they are committed to a mental hospital on account of a psychotic episode their discharge should be delayed as long as possible.

Up to the present the control of drugs of addiction in Australia appears to have been much more satisfactory than in many Western countries and in the United States, though some *Cannabis indica* is brought in by visiting seamen. The malicious administration of one or other of the hallucinogenic drugs seems a remote possibility, but occasional instances of addiction are more likely.

THE TIME OF OCCURRENCE OF CORONARY OCCLUSION.

IN a recent discussion in these columns on heart disease in industry, reference was made to the work of Master, Dack and Jaffe and to their discussion on 1620 attacks of coronary occlusion (see THE MEDICAL JOURNAL OF AUSTRALIA, February 13, 1954). These observers found that 52% of the attacks investigated by them occurred while the patient was asleep or at rest; 21% occurred during routine activities; 15% occurred while the patient was walking at an ordinary pace; and 9% occurred during moderate activity. Only 2% were associated with unusual activity. C. L. Joiner and R. Kauntze have recently pub-

[1] Baker-Bates, E. T. (1935), *Lancet*, 1: 811.
[2] Bromberg, W. (1939), *J.A.M.A.*, 113: 4.
[3] Mayer-Gross, W. (1951), *Brit. M. J.*, 11: 317.

[1] Rinkel, M., *et alii* (1952), *Am. Jour. Psychiat.*, 108: 572.
[2] Gastant, H., *et alii* (1953), abstract, *Digest. neurol. et psychiat* XXI, May, 227.
[3] "The Hallucinogenic Drugs (The Insanity-Producing Drugs: Indian Hemp and Datura): A Neglected Aspect of Forensic Medicine (A Loophole in the Law)", by Donald McI. Johnson, M.A., M.B., B.Ch., Barrister-at-Law; 1953. London: Christopher Johnson. 8¼" × 5¼", pp. 46. Price: 5s.

lished a short article[1] dealing with the time of occurrence of coronary occlusion which confirms in a convincing fashion the views expressed by Master and his co-workers. These two authors refer to the two views on how an occlusion occurs. The first is that a mural thrombus forms within the coronary artery, which has been damaged by atheroma, and eventually increases to occlude the lumen of the vessel. The final occlusion, which is abrupt, is thought to occur when the speed of the circulation is decreased. The other view is that abrupt occlusion is caused by subintimal hæmorrhage occurring beneath an atheromatous plaque, thereby narrowing the lumen of the vessel. They state that if the cause of the occlusion is commonly thrombosis *in situ*, then the thrombosis would tend to occur when the circulation was most sluggish, that is, when sleep was deep and dreamless. However, if the cause was commonly subintimal hæmorrhage, then it might occur at any time in the twenty-four hours, but would frequently bear a relationship to effort or emotion. They have examined the times of occurrence of coronary thrombosis in 100 cases. They found that there was no special grouping, and in particular, that thrombosis was no more common at night than during the day. The number of cases which occurred between midnight and 6 a.m. was 27, and between 6 a.m. and midnight, 73. Stated more precisely, the time was as follows: from midnight to 6 a.m., 27 cases; from 6 a.m. to 12 noon, 26 cases; from 12 noon to 6 o'clock p.m., 25 cases; from 6 p.m. to 12 midnight, 22 cases. In thirty-three of the cases investigated by them, the episode "was clearly related to effort or emotion". They think that their observations support the view that the abrupt incident may often be caused by subintimal hæmorrhage.

THE PREVENTION OF TRICHINOSIS.

INFECTION of man with *Trichinella spiralis* does not constitute a public health problem in Australia at present. Surveys carried out in Sydney by A. J. Bearup[2] have failed to reveal any cases in which the infection could be reasonably regarded as having been acquired in Australia, and we know of no evidence that the situation is different in other parts of Australia. Nevertheless, the condition is common enough in other parts of the world, including North America, and a problem could always arise with increased importation of uncooked pork products. In any case, it is of interest to know of new methods which are being used to control the infection overseas. Microscopic inspection of carcasses, low temperature treatment of carcasses, special processing of pork products and cooking are established methods used in the control of trichinella infections as a final precaution; and at an earlier stage of control, cooking of garbage fed to pigs prevents their infection with trichinosis, as well as with hog cholera, foot and mouth disease, vesicular exanthema, salmonellosis and tuberculosis. S. E. Gould, H. J. Gomberg and F. H. Bethall,[3] while accepting the need to prevent the infection of pigs as a sanitary precaution, also stress the fact that pork should be treated to kill any trichinellæ present. For this purpose they recommend and describe the use of irradiation. This method, they state, provides direct protection to the consumer and has many advantages over other methods. It is simple and rapid. The apparatus required is compact and long-lasting. The time of irradiation required is one and three-quarter minutes. It is effective, the meat being rendered free from the danger of trichinosis. The wholesomeness of the meat is preserved; no radioactivity is induced in the meat, no flavour changes are produced, and no harm results to the person who eats the meat. The method is relatively inexpensive. It is considered that the method should largely obviate the need for special processing (heating, freezing or curing) of certain ready-to-eat products, such as sausages and smoked ham, in order to destroy trichinella larvæ. It is pointed out that the irradiation method could well become exceedingly valuable in educating the public to eat pork as an article of diet that is safe as well as nutritious and rich in thiamine. The method would tend to eliminate trichinosis at its source, inasmuch as ingestion of scraps of irradiated trichinosis pork by hogs would not transmit the infection to them, and consequently their flesh would not carry the danger of trichinosis when it was eaten by man.

[1] *Guy's Hosp. Rep.*, 1953, Volume 102, Number 4.
[2] M. J. AUSTRALIA, April 3, 1937, and November 5, 1949.
[3] *Am. J. Pub. Health*, December, 1953.

SOAPS, DETERGENTS AND HOUSEWIVES' HANDS.

SOME interesting findings have been recently reported from a comparative investigation of the effects of soaps and synthetic detergents on the hands of housewives. This work was carried out by S. A. M. Johnson, R. L. Kile, D. J. Kooyman, H. S. Whitehouse and J. S. Brod,[1] and sprang in particular from a desire to know the effects to be expected from the increasing popularity of detergents and synthetic detergent products. According to this report, the amount of these products used in the United States has increased from less than one pound per person in 1942 to almost ten pounds per person in 1951, and almost two-thirds of the packaged household washing products sold there today are synthetic detergents. Reference is made to methods suggested some years ago by D. J. Kooyman and F. H. Snyder, in the form of a modification of the patch test and an arm immersion test, as a means of comparing the mildness of different types of soap products. Apparently so long as these tests were used to compare soap products the results were in agreement with the experience of housewives who used the products, but when patch and arm immersion tests were used to compare products as different in composition as soaps and synthetic detergents, the results did not always agree with the experience of housewives. In an attempt to find a more reliable and realistic method, Johnson and his colleagues evolved a means of comparing the average response of the skin of typical users to soaps or synthetic detergents under conditions of frequent and regular use in the home. Essentially, the test consists of having large numbers of women use the products at home for a period of time, and checking their reactions by a careful examination of the skin of the hands and arms before and after the test period. Between 200 and 300 women used each test product. First of all tests were carried out with a fine fabric soap and two all-purpose soaps; the all-purpose soaps differed in the amount of "builder" they contained. Then with a quite different set of subjects a comparison was made between the two all-purpose soaps previously used and a widely used all-purpose synthetic detergent. It was found that use of the fine fabric soap was associated with the best general skin conditions of the hands. The all-purpose synthetic detergent and one all-purpose soap were found to be similar in this respect and next best; both were somewhat better than the second all-purpose soap. In no case was the difference between products large. Perhaps the most important finding was the fact that the relative ratings of the products, as determined by the clinical test, were in general agreement with those based on personal appraisals by the women who used them.

[1] *Arch. Dermat. & Syph.*, December, 1953.

INDEX TO "THE MEDICAL JOURNAL OF AUSTRALIA".

THE index to THE MEDICAL JOURNAL OF AUSTRALIA for the half-year ended December 31, 1953, has been published. Readers who are on the index mailing list will receive their copies as usual. Others who desire to receive a copy should apply to the Manager at The Printing House, Seamer Street, Glebe, New South Wales.

Abstracts from Medical Literature.

DERMATOLOGY.

Benign Inoculation Lymphoreticulosis (Cat-Scratch Disease).

J. JAMBOR AND E. EMURA (*Arch. Dermat. & Syph.*, May, 1953) report two cases of benign inoculation lymphoreticulosis (cat-scratch disease) with positive skin test results. They state that because of the clinical manifestations benign inoculation lymphoreticulosis may mimic various other disease processes and must enter into several differential diagnoses. After some minor trauma to the skin, frequently but not necessarily the scratch of a cat, at the inoculation site, a small ulcer may develop within two to four days; it may become manifest only at the time of the development of the lymphadenopathy, or it may remain latent during the course of the infection. Within two to four weeks after the inoculation, regional lymphadenopathy occurs. This may be pronounced and may be associated with moderate fever and malaise. The nodes may persist without suppuration for months, gradually regressing in size, or they may suppurate and discharge necrotic material through the skin. Depending on the location, the process may mimic tuberculous adenitis with scrofuloderma or *lymphogranuloma venereum*.

Mycosis Fungoides: Diagnosis by Aspiration.

A. I. SWILLER, F. FELDMAN AND M. MORRISON (*Arch. Dermat. & Syph.*, April, 1953) state that since Stroebel and Hazen in 1911 studied sections of biopsy material of skin in cases of *mycosis fungoides* and described what they called typical mycosis cells as measuring from eight to ten microns in diameter and having an eccentric nucleus, the diagnosis of the disease has depended on the finding of these cells. In the cases reported here, the cells in an accompanying photomicrograph were aspirated from the skin lesion by the simple use of a dry syringe and a 20-gauge needle. The needle is inserted diagonally into the lesion, negative pressure is exerted by the syringe, and the aspirate, which is usually no more than a minute amount of material, is expelled into a glass slide and smeared out in the same manner as one smears a drop of blood. After the smear is dry, the slide is stained with Wright's stain technique as employed for blood smears. An aspirate from the skin lesion in the authors' case revealed irregular clumps of cells with nuclei of irregular size and shape. The cells showed various degrees of maturation. There was metamorphosis from a smaller round cell with a distinct, well-stained nucleus to a flat, poorly stained cell without nuclei, representing desquamation. Those cells which were intact were rounded or oval and slightly larger than a polymorphonuclear leucocyte, with a round or variably deformed nucleus and more abundant cytoplasm than that of a lymphocyte. The nucleus was dark and basophilic. The cytoplasm was a lighter blue and homogeneously clear. The bone marrow showed a shift to the left of the granulocytic elements, toxic granulations of the polymorphonuclear leucocytes, a compensatory increase in the number of erythroblasts, a significant increase in the number of plasma cells and a number of large reticulum-like cells bearing a marked resemblance to those seen in the skin aspirate. *Mycosis fungoides* is a chronic disease, the course of which is marked by four definite stages: dermatitis, infiltration, tumour formation and ulceration. The aspiration technique constitutes a simple office procedure.

Podophyllin.

L. M. NELSON (*Arch. Dermat. & Syph.*, May, 1953) has used podophyllin with success in the treatment of *condylomata acuminata*, keratosis, superficial epithelioma and recurrent epithelioma after irradiation therapy. In this study his chief interest is in the treatment of recalcitrant dermatoses with very weak concentrations of podophyllin. He states that the presence of a certain amount of moisture seems to favour the action of podophyllin. It has been shown repeatedly that moist *condyloma acuminatum* responds to podophyllin, while the dry *verruca vulgaris* does not. The perianal *lichen simplex chronicus* of one of the author's patients responded, while a plaque of similar dermatitis on the scrotum was resistant until the strength of the podophyllin was increased to 0·2%. In high concentration, podophyllin is a potent irritant. The patients treated in the author's series had, for the most part, become resistant to conventional therapy. A strength of 0·1% was selected and was used for the most part throughout the study on the glabrous skin. Zinc oxide ointment was the vehicle used. On the scalp, 90% isopropyl alcohol with 2% castor oil added was used. The patients applied the medication themselves. The alcoholic solution was applied to the scalp or the occipital region either with a medicine dropper or with a cotton wool applicator. The ointment was applied with the fingers. Strict instructions were given to avoid getting medication in contact with the eyes because of the danger of conjunctivitis. The patients were instructed to apply the medication only every three days at first. The effect on pruritus was often remarkable, especially in the perianal and vulval areas. The results of treatment of nuchal eczema were excellent. For lichenified dermatitis of the hands the drug was very useful. It was also useful in the treatment of localized areas of psoriasis (particularly perianal and perivulval). The incidence of unfavourable reactions to treatment was relatively high (11 out of 123 patients). No patients with dermatitis of the face were treated because of the danger of conjunctivitis.

Vitamin D_2 and Non-Tuberculous Chronic Skin Disease.

E. A. STRAKOSCH (*Arch. Dermat. & Syph.*, May, 1953) discusses the chemistry and biological action of vitamin D_2. He states that the average dose given by most physicians clinically is 50,000 units three times a day. An extensive pulmonary disease process, hypertension, kidney disease and chronic intestinal disease, as well as any serious pathological condition, constitute a contraindication to its use. It is imperative to watch for an increase in the blood calcium level and to check kidney function regularly when high doses are being given over a long period. Signs of intolerance are to be considered danger signals and when observed necessitate discontinuation of therapy. The first symptom is anorexia, followed by nausea and vomiting. Disturbances of the nervous system, such as peripheral neuritis and polyneuritis, as well as damage to the optic nerve leading to atrophy, have been observed. A total of 108 patients were treated with vitamin D_2. Fifty-seven patients with atopic dermatitis were treated by the author. He routinely gave 50,000 units to children up to seven years of age, 100,000 units daily to children up to twelve years of age, and 150,000 units daily to all other patients. Never did he give more than 200,000 units daily. Of the 57 patients, 15 failed to respond. Thirty-one patients with *psoriasis vulgaris* were treated. Of seven patients with generalized psoriasis, two recovered completely within three months of therapy. Of 24 patients with various degrees of psoriasis, only five recovered, nine showed considerable improvement, while 10 failed to respond. Three patients with *acne conglobata* were given calciferol 50,000 units four times daily. A pronounced improvement was observed within three months, at which time the dosage was reduced to 150,000 units daily and later to 100,000 units. A favourable response was seen in some cases of *lichen planus*, but none in cases of *granuloma annulare* and keloids.

Treatment of Melanin Hyperpigmentation.

A. B. LERNER AND T. B. FITZPATRICK (*J.A.M.A.*, June 13, 1953) present brief case histories of 25 patients treated for melanin hyperpigmentation; included are 12 patients with melasma, two with berlock dermatitis, three with nævi, one with *lentigo senilis*, three with café-au-lait spots, two with generalized lentigines and two with freckles. A 20% monobenzyl ether of hydroquinone ointment locally applied was used twice daily. Sensitization of two of the 25 patients to the ointment occurred. The authors state that ointment bases, particularly those that are water-washable, are easiest to use. Depigmentation usually appears in one to three months. After obtaining the desired depigmentation, frequency of application is reduced to once daily and later once weekly. If dermatitis develops after application of the ointment, the preparation should be diluted to 1% or 5%, and if necessary applied less frequently than twice a day.

Barber's Disease.

W. WARIS (*Indust. Med.*, March, 1953) states that in a barber's occupation short hair clippings are abundant. These penetrate, in some cases, into the finger webs, which originally are quite healthy and normal. Because of the finger movements typical of this occupation, hair clippings may penetrate into the skin, where they can cause a foreign-body granuloma and cyst formation. A sinus of this kind containing short hairs may be quite harmless for many years, until a secondary infection causes suppuration, and surgical treatment is needed. The situation of such a granuloma cyst formation is generally in the web between middle finger and ring finger of the right hand. Microscopic

examination shows that there is no horny epithelial layer on the inner side of the sinus, but the sinus is surrounded by a layer of granulating tissue extremely rich in cells. There is no horny remnant, horny lamellæ or keratinous horny substance as in epithelial cysts. The lesion is a reactive inflammation caused by a foreign body.

UROLOGY.

Penile Carcinoma.

J. H. FURLONG AND C. A. W. UHLE (*J. Urol.*, April, 1953) have studied the material regarding cancer of the penis available in the urology section of the Philadelphia General Hospital between 1921 and 1946. No factors of ætiological significance in a total of 88 cases were found, other than that of a tight prepuce or just the presence of a prepuce. The peak incidence is somewhere between the ages of fifty-one and eighty years. In 79 of the 88 cases the lesion was squamous-cell carcinoma; there was one case each of sarcoma and malignant melanoma. In the entire series, 68% of patients died of the neoplasm or of its treatment; 19% died of causes unrelated to the tumour; 12·5% lived at least five years after treatment and were apparently normal. Inguinal adenopathy was present in 65% of cases. Of 40 patients who received palliative treatment or no treatment at all, all but two died within one and a half years. Of 48 patients treated by some combination of partial or total amputation with or without radiation therapy and inguinal node resection, only 21% lived over five years, and these were apparently cured. The authors think that the poor results obtained could be improved by prompt biopsy of all penile sores with negative dark-field examination findings and by routine bilateral inguinal lymph node resection and amputation performed at least 1·5 centimetres proximal to the lesion.

Cortisone and Osteitis Pubis.

W. J. DAW AND A. H. FUNKE (*J. Urol.*, May, 1953) state that *osteitis pubis* has become a major complication of prostatic surgery, occurring weeks or even months after the patient's apparent recovery from his operation. It is an extremely painful and disabling inflammation of the pubis and ischium. The onset may be insidious or fulminating. The acute stage is stormy and incapacitating, and convalescence may be long delayed. The syndrome was first described by E. Beer in 1924, and his description still applies today. There is still much doubt about the actual causative factors. Treatment in these cases on an anti-infective basis has been unsatisfactory, but recently V. F. Marshall *et alii* have treated the disease with ACTH with dramatic results. Considering that *osteitis pubis* is an inflammatory disease involving bone and adjacent structures, the authors thought that the manifestations might be lessened by the use of cortisone, just as they are in rheumatoid arthritis, acute rheumatic fever, fibrositis *et cetera*. Three personal cases are reported in detail. The results were very good and quite prompt. Pain disappeared in twenty-four to forty-eight hours, and the patients were all out of bed and walking about on the third day. The remarkable part is that recurrence has not taken place, the first patient being treated at the end of 1950 and the other two about the middle of 1951. The dosage was usually 100 milligrammes every eight hours, given hypodermically, for the first day, with the same dose every twelve hours during the next day, followed by 50 milligrammes twelve-hourly for one week. In the next two weeks, the dosage was 50 milligrammes daily; then the course ceased.

Sarcoma of the Prostate.

G. H. DERIAN (*J. Urol.*, April, 1953) states that sarcoma of the prostate is a rare disease, only about 225 cases having been reported so far. The simplest classification is that of Stevens and Barringer, who describe two main groups, the second group not being sarcoma at all, but anaplastic carcinoma resembling sarcoma. The first group includes rhabdo-myosarcoma, lymphosarcoma, spindle-cell sarcoma and so on. The symptoms are those of bladder neck obstruction, but pain occurs frequently. Usually the prostate feels uniform, smooth, tense, symmetrical and non-tender. Regional metastases occur in about three-quarters of the cases, and distant ones in about one-half. Prognosis is poor, and the average duration of the disease is nine months. Very little can be accomplished by treatment, even with radiation or radium therapy. The disease may occur at any age, and most frequently in the first decade of life, but the single case reported by the author was in a man of seventy-six years. He was treated by suprapubic enucleation, but the plane of cleavage was poor and it was obvious that a malignant process was present. Biopsy showed spindle-cell sarcoma, so the operation was followed by radiation therapy, but the patient returned five months later with acute retention of urine, poor general condition and a hard nodular mass spreading from the prostate out to each pelvic wall. There was also pain along the posterior aspect of both thighs. Alleviation was by cystostomy, but death occurred two months later. Widely spread metastases were present.

Carcinoma of the Prostate.

F. H. COLBY (*J. Urol.*, June, 1953) states that castration and the œstrogens have a profound effect on carcinoma of the prostate, but there is little evidence that these measures are curative. If total prostatectomy, meaning prostato-vesiculectomy, is to be the accepted treatment for early cancer of the prostate, the operation should meet certain requirements. The survival rate, without evidence of disease, should be high enough to justify operation. Operative mortality and complications should be at a reasonable level. Urinary control should be good enough to allow these patients to lead an active life and not be denied to society. The author reviews 100 total prostatectomies performed at the Massachusetts General Hospital during the past twenty years. Of these, only 79 were for proved cases of carcinoma. A little over 60% of the patients in the latter group were alive and well for three years. Often the progress of this disease, even in patients completely untreated except for the urgent relief of obstruction, is very slow. On the other hand, in some cases the disease spreads quickly and is rapidly fatal. A histological diagnosis of cancer should be obtained before the total operation is performed; the surest method is by open perineal biopsy, frozen sections being examined if the operation is to be proceeded with at the same sitting. Capsular invasion is present in nearly three-quarters of all early cases, but is not of great prognostic significance, whereas involvement of the seminal vesicles renders the prognosis much more serious. As for urinary control after operation, it is often poor in the immediate post-operative period; about one-quarter of the patients were incontinent when discharged from hospital, and, in the final issue, nearly three-quarters of all patients had good control. The post-operative mortality was 5%.

Precocious Puberty.

J. M. SILAGY (*J. Urol.*, August, 1953) states that precocious puberty can be caused by a number of factors, which can be classified as constitutional, intracranial, adrenal and gonadal. Hormonal imbalance arising from premature activation of the brain centres on the anterior pituitary lobe produces an isosexual complete maturation in both sexes; both the secondary sexual characteristics and the gonads are well developed. Disturbances of the endocrine mechanism on an adrenal or gonadal level produce an incomplete sexual maturation; the secondary sexual characteristics are strikingly developed, but the gonads themselves are infantile. This distinction between complete and incomplete maturation is an important diagnostic point. Testicular biopsy, perirenal air insufflation, pneumoencephalography and urine hormone assays play an important role in differentiating the various causative factors. The author adds that since the actual writing of his article was completed, cortisone given in small maintenance doses has been convincingly demonstrated as the treatment of choice in the long-term care of patients of both sexes with adrenal cortical hyperplasia. On the other hand, an absence of clinical response to cortisone therapy with failure of the 17-ketosteroid titre to fall to normal levels is an indication that neoplasm, not hyperplasia, is the lesion.

Absorption After Uretero-Sigmoidostomy.

C. D. CREEVY (*J. Urol.*, August, 1953) states that the absorption of urinary chlorides through the mucosa of the colon after uretero-colic anastomosis frequently causes hyperchlorœmia and acidosis. Four factors are thought to influence the severity of the absorption: (i) the surface area of the colon exposed to the urine, (ii) the time of exposure (regulated by frequency of evacuation), (iii) the portion of colon with which the urine comes in contact, and (iv) the functional capacity of the kidneys. Experience with six patients suggests that the fourth factor is the most important of these. Since the kidneys suffer from dilatation and infection more often than not after this anastomosis, and since there is no practical way of preventing absorption of urinary chlorides, the solution of the problem appears to lie in protecting the kidneys from infection and obstruction, if possible. The most promising method at present seems to involve a terminal colostomy above the anastomosis.

Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

A meeting of the Melbourne Pædiatric Society was held at the Royal Children's Hospital, Melbourne, on November 11, 1953. The meeting took the form of a symposium on "Maternal Care" with special relationship to the problem of "The Child in Hospital". A film was shown, prepared by James Robertson from the Tavistock Clinic, London, and entitled "A Two Year Old Goes to Hospital".

The Effects of Maternal Care.

Dr. John F. Williams said that there had been much recent emphasis on the effect of maternal care and deprivation on the development of personality, and it seemed appropriate to discuss this in conjunction with the film to be shown. There appeared to be general agreement that the adult personality was not wholly the result of maturation of inborn potentialities, though there seemed little doubt that the effects of this were really far-reaching. Studies of identical twins and family histories could not be neglected in this regard, and neither could the changes due to endocrine maturation.

It did seem, however, that many adult characteristics were the result of a process of learning by stimulation from the environment and adjustment of behaviour in such a way that needs were satisfied and useful habits developed.

When one considered the needs of the infant calling for satisfaction, primary importance must be given to the needs for food, warmth and protection from harm, and it must be realized that those could be satisfied by a variety of people as well as the mother, though not, of course, by the child itself. The child was almost completely dependent on outside help, with only a cry to register its needs. However, it was thought that there were other needs to be satisfied, and that, with an atmosphere of love and stability, development was better than if there was a machine-like efficiency and nothing more. The evidence for this need for love in the infant might not be wholly conclusive, and it might be that emphasis on this was merely a result of the adult's love for the helpless infant, but evidence was accumulating that the unloved child did suffer. The loving relationship of mother and child had been stressed throughout the ages in literature and art, but emphasis on the importance of some aspects of this had resulted largely from psychoanalytic interests in the emotional life of the young child; though, quite apart and preceding this, there had been the influence of Dr. Montessori and early kindergarten pioneers. The evidence from psychoanalysis had been gathered mostly in the treatment of neurotic adults by free association and interpretation along Freudian lines. It had led to theories of infantile instinctual urges of a so-called sexual nature which were pleasure-seeking, and other conflicting urges which were aggressive in nature. It was thought that in early infancy the object that satisfied those conflicting instincts was the mother's breast, and that when the infant was not at the breast there was continuous frustration. The infant attempted to overcome this frustration by autoerotic activities, such as thumb-sucking, as well as by fantasies of devouring the mother *et cetera*. Later there was shift to the pleasures of excretion, and again the mother's attempts at toilet training might be interpreted as hostile and give rise to fantasies of aggression and guilt.

Later still, at about the age of four years, there came the genital phase, culminating in the Œdipus conflict, when the child wished to possess the parent of the opposite sex and destroy the parent of the same sex. It was thought that those conflicting wishes and fantasies in infancy acted as the basis of adult personality, and faulty management at any phase of breast or toilet training might possibly lay the foundation of a psychotic or neurotic illness. Moreover, from the emotional reactions of mother and infant came the formation of concepts of right and wrong, which underlay future standards of behaviour.

Dr. Williams said that this summary of psychoanalytic doctrine was quite inadequate and took no account of the divergent schools of thought and later developments. It would, however, probably pass most analytical authorities as not being misleading. Dr. Williams said that it appeared to be at best only partially true and largely neglected many other aspects of infantile existence, such as the infant's interest in the world at large and in other people and things, and its joy in its own muscular activities and creation. It also neglected other factors playing a large part in personality development, such as endocrine balance, bodily size, intelligence, sensory defects and organic cerebral damage. The hypothesis seemed to be biased by the facts of Freud's own development as the son of a young and beautiful mother and an aged and stern father in a very difficult social environment. Many of the results of analysis by his disciples seemed to be determined by preconceptions from their own analyses. However, they had served as a very powerful stimulus to research. Preconceptions might also bias one's interpretation of the observed behaviour of infants, and the results of introspection as to one's feelings were unreliable owing to the existence of the almost universal amnesia for the events of infancy as well as the effects of repression. There was no knowledge of the infant's thoughts. Objective study was difficult, but in recent years much evidence had accumulated as to the effect on later development of separation of child and mother for short or long periods. That evidence came from many sources, such as children in hospitals and institutions, and from many authorities, pædiatricians, psychologists, psychiatrists and others. Dr. John Bowlby, of the Tavistock Clinic, had gathered much of the information, including his own researches, into a WHO monograph on "Maternal Deprivation and Mental Ill-Health" as well as a Penguin publication "Child Care and the Growth of Love". The film to be shown came from the same source. Bowlby stated: "What is essential for a child's mental health is a warm, intimate, continuous relationship with his mother or mother substitute in which both find satisfaction and enjoyment." This relationship led to the development of only moderate anxiety and guilt, which, if in excess, were thought to characterize mental ill-health.

The effects of institutional life in the infant and young child seemed to be considerable intellectual retardation and lack of a warm emotional contact with others, and might give rise to delinquency of a particularly difficult type to treat. That might well be due to lack of a mother's love in infancy, but other factors might also be playing a part. It also seemed that many children during and after a stay in hospital showed changes in behaviour and personality, but those again might be due to loss of factors in the home other than the mother's presence together with factors in the hospital routine. The attitudes of mothers varied widely, and although there was no doubt of the value of a loving, stable and wise mother, there was some doubt whether publications such as Bowlby's might not do harm by overemphasis on the role of the mother and the creation of undue anxiety over temporary separation.

As David Levy pointed out in 1943, there were many problems arising from maternal over-protection, whether that was natural or neurotic in origin, and Bowlby stated that it was the child who had a close and warm relationship with the mother who suffered most from deprivation. Many mothers for a variety of reasons rejected their children, and that rejection might be hidden under a show of perfectionism or over-protection that could do great harm to the developing child. All efforts to provide love and security and stability were often nullified by that often unconscious rejection.

In other cultures, the care of the child often fell on quite a large group, and in those cases it seemed that many of the difficulties of Western civilization were avoided. Although *post hoc* was not *propter hoc*, there was room for thought whether one was not being led to extremes in advocating the desirability of one mother or mother-substitute alone. The infant needed love, security and stability, but that need should not exclude fathers, elder brothers and sisters, uncles, aunts and even grandparents, who could and often did play useful roles in the development of the child's interest in the outer world. However, it seemed that all who were not mothers must yield supremacy of influence to them, for it was the wise, stable and loving mother who was best able to satisfy all the needs of the child and act as the representative and symbol of all the environmental stimuli and pressures. It was also she who could best say "No" when "No" was necessary, and take upon herself the frustrations and rages of the infant who in later life would surely bear the imprint of the love and attention she had given.

"A Two Year Old Goes to Hospital."

The film "A Two Year Old Goes to Hospital" was then shown. Dr. John Colebatch, in introducing the film, paid tribute to Dr. Jeannie Stirrat, who had previously worked with Robertson in London. At the end of 1952 she had ordered the copy of the film to be sent to Melbourne and had been most enthusiastic in proposing that it be discussed by the Melbourne Pædiatric Society. Unfortunately it had not arrived before Dr. Stirrat returned to England, and the

present meeting of the Society was the first one available for its presentation. Dr. Colebatch said that he felt that the delay was regrettable in one sense, for the subject of the film was undoubtedly a very important one to members of the Society. On the other hand, in the meantime several English commentaries on the film had been published, formal and informal discussions on it had been held in Australia, and quite a number of the members had already seen the film at least once. It was therefore probably true that a large proportion of the audience was already sensitized to the problem illustrated by the film and would be better able to discuss it critically, free from the influence of the emotional appeal which the film undoubtedly possessed.

The hypothesis on which Robertson and others in Bowlby's research team at Tavistock Clinic had been working for the past two or three years was that a prerequisite of mental health in later life was the experience of a warm, intimate and continuous relationship to the mother (or permanent mother-substitute) in the early years of childhood. A good case had already been established for the view that gross and prolonged deprivation of maternal care at that early age might seriously impair an infant's chance of developing into a mature adult, free from personality disorders. The problem tackled by the film "A Two Year Old Goes to Hospital" was: to what extent could less severe and less prolonged maternal deprivation affect the mental or emotional well-being of the growing child and future adult?

The film provided a factual record of the behaviour of a child of two and a half years of age during eight days out of her mother's care—in an institution. She was an only child who had never previously been away from her mother. The particular child was chosen at random by a clerk from the list of those awaiting operation for umbilical hernia, and the setting of the film was the ward of a hospital that was considered a good one by contemporary standards. The only deviation from normal ward routine was the arrangement of a special play session for her each morning. That had the effect of demonstrating certain aspects of her emotional state that might otherwise have been unrecognizable.

A sound track had been added after the film was made. Dr. Colebatch said that he felt that some would consider that a mistake; although the commentator aimed at merely amplifying the objective record, leaving its interpretation to the audience, it seemed unjustifiable to claim that his explanatory remarks and intonation were free from a subjective element, as a scientific film should be.

The film was then presented in full, followed by Robertson's account of four episodes during the twelve months after the child left hospital, interpreted by the producer as showing that despite her apparent recovery, she still had a "deepseated anxiety which could be touched off by trivial happenings".

The Child in Hospital.

DR. V. L. COLLINS, referring to the film, said that perhaps one's first impression was how ordinary it all seemed. Some might tend to draw too literal interpretations from the film, but it could be stated that the film did not prove anything. Most of the audience could say that they had seen many children much more upset than "Laura". Dr. Collins said that the film had been shown recently to the ward sisters of the Royal Children's Hospital, and there was no doubt about the manner in which they were sensitized to the child's reactions in hospital. Many admitted that it made them much more aware of the small child's emotional needs and the part the parents played.

Many questions must have presented themselves as the film proceeded, questions concerning admission procedure, bathing, visiting and occupation of children in hospital; those questions deserved comment.

Dr. Collins thought that it was unnecessary to be too scientific in trying to estimate the degree of psychic trauma suffered, or even to attempt to evaluate the effects of separation upon the child's later life, although such thoughts would undoubtedly be prominent as a result of Bowlby's work. With a simple knowledge of human needs—whether they were those of the pre-school child, school child or parent—it was possible to improve one's understanding of the needs of the child who spent a short period in hospital, away from home. The main problem was the child under five years of age, as the school child often found that admission to hospital was an interesting experience.

A simple analogy was revealed in the attitude of a mother who planned to leave her small child with a friend for a week-end or a week. One could imagine how the mother would paint a picture of the place to which her child was going, the people whom he would meet and what he would do. The mother would paint a truthful picture. One could suppose, too, that the mother had told the friend of some of her child's peculiar ways, unusual expressions, routine habits and so on, and that they had planned what toys and treasured belongings the child would bring with him. The child would be encouraged to feel at home by means of affection and numerous little tricks to make the environment familiar.

Dr. Collins said that a similar approach should be made to the small child entering hospital. How much was the child told before he was admitted to hospital? To what extent was advice given to the mother on how and what she should tell the child? In admissions of election, it should be possible to provide her with some instructions upon this—emphasis being laid on the point that she should tell the truth to the child, stating a little of what would happen and when she would visit.

With more urgent admissions, the problem was different. The mother might have told the child that they would see the doctor at the hospital and then come home, but when the child was left at the hospital he would regard his mother as a liar and would begin to distrust her. It was advisable that the admitting doctor or referring doctor should tell the child (even small ones) why he must go to hospital, and then the child could not blame the parent for leaving him there. Admitting officers had found frequently that parents were a little alarmed when the child was told that he had to be admitted and why, and that they were surprised when they saw how well the child received the news.

Dr. Collins said that one event which stood out in the early part of the film was the child's reaction to the bath. Was it necessary? If so, why was mother not present during the bath? How often were children bathed unnecessarily on admission to hospital? Many mothers gave their children baths either the night or morning before admission, so that they would be proudly presentable, only to see them insulted by being undressed in the middle of the day and whisked off for another bath. That arose from a firm routine in the nursing profession that all new patients, adults or children, if well enough, were given baths before being placed between clean hospital sheets. If there was no such routine and the decision was left to the good judgement of the nursing staff, there existed the fear that the nurse would take advantage of the situation and that grimy hands and feet would be seen protruding from the bed clothes. It was important to develop an elastic approach to this problem of nursing, and the problem was under discussion with the nursing staff at the present time.

Another question concerned admission to hospital, especially in regard to the well child, for whom, say, an operation was planned for the following day. From the child's aspect, what was the best time of day for admission? Should he be admitted in the evening so that he could go to bed naturally and happily after arrival and be tucked in by his mother? Should he remain in his ordinary clothes for a while, or go to a play room, and get to know some of the other children and staff there? Should he go straight to the ward in which he would be nursed, so that he could become familiar with the staff in that unit as soon as possible? There was considerable room for discussion on that subject, but often the child's point of view was not considered, and the decision was made upon the availability of medical staff to examine the child, or in relation to the planning of the operating list for the next day. Unfortunately available bed space sometimes left no alternative.

The question of personal care and individual attention became important once the child was admitted. The nurse should realize that she became the mother-substitute; but it was a problem to arrange reasonable continuity of care from nursing staff, when the staff changed so frequently. Over the past three years, at the Royal Children's Hospital, the wards had been divided into ten-bed nursing units, and that had helped both nurses and children to get to know each other. Patient or case assignment rather than work assignment had become possible. Even so, with the forty-hour week and days off, there were too many staff changes for the best individual care. Sir James Spence expressed the problem clearly when he said: "The most difficult and time-absorbing task in nursing is the care of the youngest children, who must be nursed, fed and changed at frequent intervals of the night and day. If in addition there is much technical treatment the care of one seriously ill infant becomes one woman's work. If there must be off-duty periods, it will be two women's work. If we introduce the three shift system, it will be three women's work. While

these infants are in hospital their mothers are at home suspended in anxiety. It would seem logical, therefore, that a solution of the problem should be found in admitting the mothers to the hospital to nurse their own children."

Dr. Collins then proceeded to deal with the much discussed question of visiting children in hospital. He said that the change to daily visiting from fortnightly and weekly visiting had been slow because the attitude to the problem had been governed by the fear that the parents might introduce infection to the wards. Yet daily visiting was now the custom in most children's wards in Melbourne. The staff of the Queen Victoria Hospital had found over several years that free visiting—visiting at any time of the day—was most satisfactory, and the medical staff of the Royal Children's Hospital believed that free visiting was the ideal arrangement. Fairfield Hospital in their infectious wards had found daily visiting successful. It was difficult to assess to what extent daily visiting by parents diminished emotional disturbances when the child returned home. The child under five years of age who was so dependent upon his parents and who could not understand why he had been removed from home was the main problem. Children aged from two to four years were the most homesick group. It had been customary to tell parents not to visit that group of children, because visiting upset them. Yet those children felt deserted by their parents, and it was essential that the parents visit them frequently—perhaps more than once daily at first—if they were to feel that they had not been deserted. Some studies had shown that there was less crying with frequent visiting, and that children aged from two to four years settled down more quickly, although at first there might be considerable crying when parents departed. Nurses had been instructed in that approach in recent years, and they had been examined on the method of admitting a child to hospital or the management of home-sickness in a three year old. It had been found that the nurses had difficulty in appreciating the need of visiting for the child who was upset when the parents departed. An associated problem was the consequences of parents' frequent visits. What was the reaction of a small child who was accustomed to being picked up and nursed by the parents, when the mother walked up to the side of the cot and just talked and smiled? If the child felt rejected before, he would still feel rejected if he was not picked up. Surely it should be arranged that, if there were no medical or surgical contraindications, a mother should be able to pick up and nurse her child when she visited him in hospital. For the mother to handle her child naturally and freely, she should feel at home in the hospital, and so the sequel to daily visiting was a good relationship between the ward sister and the mother. The mother must have confidence in the nursing staff, and she would see much more of their work, their methods of handling children and in particular their ability to treat her child as a child should be treated. Visiting, therefore, should automatically raise the standard of pædiatric nursing. The nurse would learn from the good mother. She would come to appreciate better the individual variations in children. Mother, in her turn, would learn methods of handling her sick child and would become a better mother if the liaison was a good one. With an appreciation of this friendly relationship between ward sister and mother, the analogy of mother leaving her child with a friend was resumed. All who had observed children closely knew that for some children a period of daily visiting was not enough. It was necessary to recognize certain children who needed much more mothering than the nursing staff could provide, and to arrange for the mother to spend many hours, or perhaps most of the day, in hospital with her child. There were some children who would not recover in a hospital atmosphere even with their mother, and then it was essential to send the small child home with mother as soon as possible, away from the tension of hospital life, with its association of needles and other painful procedures. The problem of masks should be mentioned. They often frightened children, were often misused and were frequently a danger rather than the symbol of safety which, when used properly in the right place, they might be. Another of the major problems today was the means of decreasing or preventing the number of painful pricks which a child received in hospital.

Dr. Collins then approached the problem of occupation. He said that in the film there was a daily play period. But what happened for the remainder of the day? Even in the short time when the child was photographed there were periods of boredom, staring, nose-picking. It was always boring to be in bed when feeling more or less well, and there should be facilities in hospital to meet the occupational needs of the child. Ideally the nurse should have time to play and read to the child—but nurses were busy, their time was required for nursing procedures, and they had insufficient time for that more pleasant aspect of child care. Because of those facts, many hospitals had introduced special staffs to meet the occupational needs of the children. Occupational therapists and kindergarteners had come to play an important part. Yet no group of staff were adequately trained for this purpose. Occupational therapists were trained in the broad field of remedial activities to meet various medical, surgical and psychiatric conditions. They had a limited training in children's illness and an even more limited training upon the normal child and his needs. A pre-school teacher would be ideal for the pre-school child, but her training did not include a knowledge of illness or care of the older child. Both those groups, therefore, needed further training before they could supervise a child's occupational needs adequately. Further, they worked only five days in the week and were not on duty after 5 p.m. and over week-ends and holidays. It was necessary to forge a close link between occupational staff and nursing staff, so that many of the favourite toys, books and games used by the occupational staff could be used by the nursing staff at other times. It was desirable to have a separate play room in each ward, and also a central occupational or play room with a greater variety of equipment, where children from different wards of the hospital could be brought together. In such areas, not only was the child occupied, but he could relax more happily away from the tensions of ward activity, needles and investigations.

In referring to avoidance of admission to hospital, Dr. Collins said that as far as possible, within the limits of good medical care, the child should be cared for in his own home, but that was not possible at present for prolonged illness, as it was doubtful whether satisfactory treatment and the child's educational needs could be met if he remained at home.

With acute illness the child might be unnecessarily placed in hospital for a number of reasons. The first was for economic reasons. The parents could not afford a doctor, and the child was taken to hospital and admitted for short-term observation. Under better economic conditions such observation might have been carried out in the home if the family doctor could have made one or two further visits on that day. If a national scheme like the Medical Benefits Scheme covered the population fully, then that reason for a too ready admission to hospital would go. If the scheme was a profitable one per visit, the doctor might do everything possible to treat the child in his own home. If the scheme was an inadequate one financially, then patients might be too readily transferred to hospital (as was happening in England at present).

Dr. Collins said that the issue inevitably reverted to the quality of medical practice. The higher the standard of pædiatric practice, the more confidently and readily would the family doctor or physician treat the child in his own home. Similarly, the higher the standard of practice in pædiatric hospitals, the more quickly would correct decisions be made, and the more promptly would patients be returned to their own homes and the care of their family doctor.

With long-term illness the problem was different. If Bowlby was correct, and there was good reason to believe that there was much substance in his thesis, one had to be very cautious in insisting that a child under four or five years should be admitted to a long-stay hospital for more than three months. Undoubtedly evidence was growing that periods of separation and loneliness had a bad effect on children, especially those under five years of age. Children usually affected were those suffering from tuberculosis or orthopædic conditions. Rheumatic patients fell into the school age group and presented a different problem. Some of those preferred home rest with correspondence tuition; whilst others undoubtedly were happier in an institution with ordinary teaching facilities. Because institutions were available for tuberculous and orthopædic subjects, children had been readily sent there without perhaps sufficient thought being given to the long-term effects upon their emotional and mental development. Surely the orthopædist should consider every possible alternative before sending a small child to an orthopædic hospital. An effort should be made to treat the child at home if possible; and if parental competence in managing orthopædic patients was suspect, it represented a challenge to better home-care services, so that she could be helped and trained. Twenty years earlier, for economic reasons, Dr. Jean Macnamara had developed an itinerant physiotherapy service for poliomyelitis patients, and the majority of poliomyelitis children had been treated in their own homes since. One had only to talk to the parents to realize how they had appreciated that. How right it had all proven to be in the light of modern knowledge.

It would be informative to find out from orthopædists what conditions suffered by children under five years of age really needed treatment in a long-term institution because of the inadequacy of properly organized home facilities, integrated with brief periods in hospital. When a mother could not afford to bring her child from the country at six-weekly to twelve-weekly intervals to have new plasters applied, or did not supervise rest well, the simple answer might be that of placing the child in hospital. But more subtle solutions should be considered. It was so much easier to spend a lot of money in keeping a child in hospital than to make a cheaper more complex arrangement; for example, by paying some of the mother's transport and accommodation costs when she was visiting a consultative centre or by organizing the proper type of home-care service. Yet both economic factors and the small child's emotional needs were dictating the latter course.

Dr. Collins said that it was a platitude to reemphasize that the child should be regarded as a whole, but he would like to end with a quotation from Grover Power's paper on "Humanising Experiences in Hospital": "Let there be no taboo on tenderness. How we regard little children—we pædiatricians—as reflected in a multitude of noted and unnoted words, attitudes and deeds sets a pattern with which we too little reckon—a pattern for parents, students, nurses and fellow physicians. In my philosophy, our example is our only way of humanising, if we do even slightly, this distraught world."

DR. KATE CAMPBELL said that unrestricted visiting of parents to children had been the practice at Queen Victoria Hospital for the past seven years. The arrangement found favour with parents and children as well as with the medical and nursing staffs. The mothers were often very helpful in the ward, and were able to relieve the nurses of certain duties, such as feeding, changing clothes and play therapy. A mother could kiss her child goodnight, tuck it in and leave the child settled, contented and secure. Resident medical officers benefited from the practical experience in human relationships gained by observing parents with their children. The nursing staff developed a greater respect for parents' capabilities. Parents were able to observe the treatments given to their children and lost all suspicion. Much depended on the personality and character of the individual ward sister, but the system had everything to recommend it.

DR. JEAN MACNAMARA commented on the system of using itinerant physiotherapists for the treatment of poliomyelitis. She said that it was primarily introduced during the years of the depression for economic reasons, but the results were found to be so much better than when the children were kept in hospital, that the system had been retained. Children were more cooperative and generally happier, and the parents felt that they were aiding their children. Many fathers were able to assist mechanically in the construction and adjustments of splints. Country children who lived outside the range of itinerant physiotherapists still required institutional management, but at the Hampton Convalescent Branch of the Royal Children's Hospital, parents were allowed frequent visiting and soon became very proficient in the management of their children. That decreased the duration of the children's stay in hospital. Dr. Macnamara said, in conclusion, that she was convinced that the system of free visiting and home care was better both psychologically and economically.

DR. S. W. WILLIAMS, referring to the film, said that in his opinion the Tavistock Clinic seemed to be rationalizing many factors which were probably quite insignificant: it was surely not uncommon for small children to cry occasionally at home when their socks were changed or when they were bathed. He approved of the fact that attention was being focused on those aspects of hospital management of children, but one had to maintain perspective and not attempt to place an interpretation on every action of a small child. He said that he would like to hear the mothers' attitude. Although they liked visiting their children, too frequent visiting or "living in" might have a definite effect on the rest of the family at home, and doubtless at times would result in an emotional unheaval as great as that suffered by the child in hospital.

DR. ROBERT SOUTHBY asked Dr. John Williams whether he had been able to trace any psychological aberrations in adults to a stay in hospital during childhood. Dr. Southby said that he himself could not remember a specific instance.

DR. JOHN WILLIAMS, in reply to Dr. Southby, said that he was unable to say what effect a stay in hospital had on children in later life. Doubtless there were some who were psychologically harmed, but probably the majority were unaffected. The problem should present an interesting field for research.

DR. J. B. COLQUHOUN said that he had had long experience in the management of children with orthopædic disabilities. At the Frankston Orthopædic Branch of the Royal Children's Hospital, when visiting was once a week there appeared to be less confusion for all. Free visiting appeared to be a greater burden on the nursing staff. Dr. Colquhoun added that he was inclined to agree with Dr. Stanley Williams that the absence of a mother from home put a great deal of strain on the remainder of the family. He went on to say that he had actually been impressed with the fact that institutional life had a good effect on the personality of many young children. There were very few conditions which required young children between the ages of two and five years to be immobilized for long periods. The main group appeared to be sufferers from poliomyelitis from country areas, and for those there appeared to be no alternative. Dr. Colquhoun concluded by saying that he would cooperate gladly in any new approach to hospital visiting.

DR. H. E. WILLIAMS said that "Laura", the child in the film just shown, had been in hospital for a much longer period than was really necessary; in that respect she had been managed badly. He asked whether it was necessary for a small child aged two to three years, who was in hospital for two to three days only, to have any visit at all from the parents. Such children had returned home almost before they had appreciated the shock of the initial parting.

Dr. Kate Campbell, in reply to Dr. Williams, said that most of the psychological trauma occurred in those first few days when the child felt abandoned. Visiting was really more necessary at that time.

SISTER M. IVERES said that free visiting of parents to children had been permitted in the Children's Ward at the Queen Victoria Hospital for the past seven years; and as the nursing sister in charge of the ward, she would not like to see a return to the old system of visits once a week. With weekly visiting there was absolute chaos. The parents came together, and went together, and at the time of departure there was a state of bedlam. Furthermore the customary visiting hours of 3 p.m. and 6.30 p.m. were inconvenient for parents and interfered with household routine. Since the introduction of unrestricted visiting there were rarely more than five parents present at the one time in a ward of 30 patients. There was less disturbance, with no chaos and happier children and parents whose anxieties and suspicions had been allayed. Miss Iveres quoted some examples of children who had appeared to be difficult patients initially, but who changed surprisingly on the commencement of unrestricted visiting. She said that nursing sisters and trainee nurses should give more attention to parents. Such a courtesy repaid itself manyfold in cooperation and consequent ease in managing a ward. In conclusion, Miss Iveres said that as one who had had extensive experience of both systems, she would choose unrestricted visiting without hesitation.

DR. JOHN COLEBATCH said that he could not agree entirely with the interpretation which the Tavistock workers had placed on the film which had been shown. "Laura" had been a well-behaved child with self control. Would it not have been less harmful to her personality later in life had she been a little more demonstrative? To illustrate how much more many children might be affected by such separation, Dr. Colebatch mentioned the story of a child whom he had been asked to see recently. She also was a girl aged two and a half years who was an only child, and who had never previously been separated from her mother. She was admitted to a residential nursery, as her mother was going to hospital. After a couple of days the sister in charge of the institution said the child was "reasonably settled", but a few days later, after visits by her father, she became very apathetic and anorexic, and wanted to stay in bed all the time. Eventually, because of her unhappiness and persistent anorexia, she was taken home again and cared for there by her father's sister, a very sympathetic and sensible person. However, the father stated that at home the little girl would hardly speak at all; she did not eat, was extremely negativistic and miserable, and wanted to stay in bed. When she saw old friends, she would greet them with a shout of joy and would then sharply stop as if frozen, and say "No!", withdrawing again into her shell. After improving slightly, a week later she suddenly became much worse on the day that her mother returned from hospital; she wanted little to do with her mother, preferring her bed or or father's arms. Dr. Colebatch said that he thought that that example illustrated the exception, rather than the customary conduct of small children on separation from

their parents. Most children appeared quite unaffected by their experiences. It was unlikely that Sir Winston Churchill's character would have been much affected by such a separation.

Dr. H. McLorinan said that he was convinced that young children suffered some psychological trauma on being separated from their parents. One should attempt to make the strange hospital environment as much like home as possible, and allow unrestricted visiting by the parents. That was customary now at Fairfield Infectious Diseases Hospital, and appeared to benefit children, parents and staff. There was no risk in parents visiting their children with an infectious illness, as contact had been made before admission to hospital. The staff at the Queen Victoria Hospital had dealt properly with the problem of visiting. Dr. McLorinan then quoted an instance of a potentially fractious child who behaved in an exemplary manner after his mother commenced to live in.

Dr. John Williams said that he considered that the film was probably biased by a preconceived idea that maternal deprivation was the root of all evil. Although some children were adversely affected by being in hospital, probably to most it represented only a minor tribulation which had no greater psychological affect than many other tribulations which they would suffer during life. One should endeavour to make a child's stay in hospital as happy as possible.

Dr. V. L. Collins said that any attempt to conduct research on the subject would be beset by many difficulties, and it would be very difficult to obtain accurate conclusions. A mother should be allowed to arrange her visiting to fit in with her own needs at home. Dr. Collins said that he agreed with Dr. Kate Campbell's statement that the initial days in hospital were those when the separation was felt most by the child. One should no more subject a child to separation from its mother than subject it to the risk of infection.

Out of the Past.

In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.

THE PHYSICIAN AND THE SURGEON.[1]

Men are laden with all manner of honours, and recognized as the most skilful practitioners, who can extirpate a tumour, amputate a limb, or otherwise cut a body, but the man who endeavours to discover or explain first causes is looked upon as something worse than an idiot in his profession. The one reaps his repute and laurels solely by fighting with secondary laws—the other is lost in obscurity while trying to prevent pain, rather than boasting of the science of lopping off heads, arms, legs and noses, tapping and scooping bucketfuls of hydatids out of the liver. . . .

Correspondence.

HEART DISEASE IN INDUSTRY.

Sir: Dr. E. S. J. King's views on subintimal hæmorrhage have been given such prominence by Dr. Ulric Brown in the really splendid paper on the above subject—and by this it is not meant to imply any lessening of appreciation for Dr. Frank Lawes's or Dr. Calov's contributions—that I would ask your indulgence for the following comment.

It "might not seem idolatry to kneel", little alone take to task expressions of opinion of one of the academic stature of Dr. King. It is the more reason why I have not been happy in his criticism of those who regard subintimal hæmorrhage as a major cause of myocardial infarction.

Dr. King invokes Poiseuille's law to disprove the theory that a rise in coronary artery pressure can cause rupture of those capillaries of the intima that arise from the lumen. He is prepared to concede the possibility on Bernouilli's principle that rupture of those capillaries arising from the *vasa vasorum*, that is, transmedially, might occur in the event of both a positive pressure in such capillaries and a lessened pressure in the coronary artery as a result of the bulging into its lumen by the atheromatous plaque. Apart from any question of the validity of applying physical laws to biological tissue with its variables, it is difficult to see where any factor of hæmodynamics is involved in the case of a hæmatoma which would not be in direct channel communication with the lumen.

From these first premises Dr. King goes on to say that "cardiac infarction is not due to subintimal hæmorrhage of coronary vessels"; that, though "subintimal hæmorrhages may be seen in atheromatous plaques projecting into the lumen and reducing it to a mere slit" as morphological phenomena they have been "given an importance out of proportion to their real status".

Now, if Dr. King's idea is to reject the proposition that fatal coronary occlusion is a common outcome of a sudden rise of pressure in the intimal artery as a result of heavy strain, then I am in accord with him—with minor reservations. Such pleas could be dangerous nonsense to serve up to compensation court judges, when it is known full well that the majority of coronary episodes occur at rest. But why should a pathologist ignore the concept that a vascularized atheromatous patch may break down with erosion of its vessels, hæmorrhagic necroses and—even if a little removed in site—ischæmia and myocardial infarction?

At the moment I am content to remain a "mystic" in Dr. King's eyes. As a clinician I find the concept of the subintimal hæmorrhage and its associated phenomena a means whereby I can reconcile the varying syndromes of coronary artery disease and thus achieve a yardstick for prognosis and management. If I am assisted "psychologically in a matter of apparent omniscience", at least I can feel absolved pending such time as distinguished pathologists find common cause.

Yours, etc.,

149 Macquarie Street,
Sydney,
March 21, 1954.

W. J. McCristal.

References.

Brown, Ulric M. (1954), "Heart Disease in Industry", M. J. Australia, 1: 236.

King, E. S. J. (1952), "Hæmodynamics of Subintimal Hæmorrhage", *Australasian Ann. Med.*, 1: 18.

STAPHYLOCOCCAL INFECTIONS IN BABIES.

Sir: During the last few months I have seen some serious staphylococcal infections occurring among babies recently discharged from maternity hospitals, and it is the impression of some baby health centre sisters that abscesses among newborn babies are increasing in incidence. All these infections have their origin in maternity hospitals, and it is not always recognized that pustules, sticky eyes, moist umbilical cords, often associated with jaundice, are usually staphylococcal infections and potentially dangerous.

An investigation which will soon be reported has been carried out at the Royal North Shore Hospital, in which Dr. Rountree, of the Fairfax Institute, Royal Prince Alfred Hospital, has phage-typed all coagulase-positive staphylococci occurring in the maternity departments, and Dr. Durie has determined their sensitivity to antibiotics. They have isolated one strain that appears particularly liable to cause abscesses and cellulitis in babies and breast abscesses in mothers; it is penicillin-resistant and aureomycin-sensitive in most cases, and many patients that we have seen readmitted to hospital had progressed to abscess-formation while on penicillin because the organism had not been recognized as resistant.

During the last month a more virulent strain has been isolated from babies and adults in several maternity and general hospitals. In babies it has caused large pustules, abscesses, particularly breast abscesses, and rapidly spreading cellulitis, as well as conjunctivitis and umbilical sepsis. In adults it has caused cellulitis and abscesses, particularly breast abscess and mastitis. It is penicillin-resistant, and so far it has mainly been sensitive to aureomycin, but it is feared that it may become resistant very soon and cause more widespread infection.

I wish to attract the attention of maternity hospitals to this organism and stress the importance of prevention of

[1] From "Typhoid Fever, Its Pathology and Treatment, Based on Rational Physiological Principles", Sydney, 1873, by Andrew Ross, M.D., medical practitioner, of Molong, New South Wales.

cross infection. As most of these babies are being seen by general practitioners after they go home, I should like to make a plea that the newborn babies with large pustules, abscesses or obscure severe illness (often pneumonia, lung abscess or umbilical sepsis) be treated for a short period with a proprietary brand of tetracycline. I think that the less virulent infections should be treated locally, spirit to pustules and "Albucid" or "Argyrol" eye drops for conjunctivitis. Penicillin is rarely effective in any form, and with too lavish use the other antibiotics will be lost to us, whereas the power of nature with a little local help is wonderfully effective. In my experience an antibiotic if it is going to be effective shows results in twenty-four hours, certainly within forty-eight hours. Using aureomycin for short periods, we have had very little gastro-intestinal irritation and only two cases of easily controlled thrush. However, in hospitals where thrush is a common event great care must be taken to examine babies daily for oral thrush and to treat it early, or generalized monilial infections will occur. Skin and oral manifestations of thrush are not uncommon.

The dose of aureomycin in use at Royal North Shore Hospital is 25 milligrammes per kilogram of body weight per day for babies; it is dissolved in sweetened distilled water and given four times a day during feeds. Vomiting and diarrhœa seemed more likely to occur if the aureomycin was given between, before or after feeds.

It is almost certain that the tetracycline preparation will only be effective for a short time, but it may control this present strain. The real need is for early recognition of these infections and prevention of cross infection in maternity hospitals.

Yours, etc.,

CLAIR ISBISTER.

The Royal North Shore Hospital of Sydney,
March 18, 1954.

NEW SOUTH WALES BRANCH COUNCIL ELECTION.

SIR: I submit again that our mode of election of officers is not truly democratic and needs alteration. Take, for instance, the election of country local associations members. Why on earth should metropolitan members have a vote on that? Does anyone believe that as much as 10% of metropolitan members know enough about the three country candidates to be able to give an intelligent vote, or even know of any of them by name?

Yours, etc.,

C. C. McKELLAR.

143 Macquarie Street,
Sydney,
March 16, 1954.

TRAINING FOR GENERAL PRACTICE.

SIR: It was very pleasing to note in a letter by Dr. Coppleson in a recent journal (March 6, 1954) that a series of conferences on graduate and post-graduate medical education is to be held in Sydney, and that the subject for discussion for the first conference is "Training for General Practice". It is also pleasing to note that Sir Charles Bickerton Blackburn, Chancellor of the University, is to open the conference.

I am not aware that undergraduate medical education will form part of the discussion, but it appears to me that the training of doctors embraces all phases of education right up to the time when they enter the field of general practice, and, of course, it continues thereafter for a lifetime.

The need for a conference of this sort is quite urgent, and one looks forward to similar conferences being held in the other States with medical schools. This conference should be very useful in pointing out the difficulties of the situation which should be taken into account by the other States. At a later date it will become apparent that there is need for a conference of representatives of all the medical schools and of all people interested in training for general practice.

For some time past now it has been brought home to me that medical students from other States wishing to commence their medical education, and also those who for various reasons wish to transfer from one State to another, are under grave disadvantages owing to the fact that the matriculation examinations for the various universities vary so much. It should be possible to make it much easier than at present for these students to transfer when they have good and sufficient reasons—as many of them have—for so doing.

Another matter in which there is some difference of opinion, and also some difficulty, is that the Melbourne school restricts the entry of medical students, whereas Queensland and Sydney do not. I am not sure of the practice in Adelaide.

I would draw your readers' attention to an article by Professor Sunderland in the *Melbourne University Gazette* on the selection of medical students. Two points which I would emphasize in the selection of students are that at the present time in Melbourne, students are selected on an examination in which the science subjects alone are taken into account. Most people nowadays are of the opinion that the education of medical students is too specialized too early, and the cultural subjects should once again be given some attention, and this condition of affairs obtains in Melbourne.

The other point is that students are selected according to their passes in this examination. Of course, these passes are records of academic achievement; if anybody studies academic results for forty or fifty years, they will see that many brilliant graduates have failed to make the grade in practice, and alternatively many "pass" students have done brilliantly in practice and after life.

Would it not therefore be fairer, if there is to be restriction of students (and I realize that there are very good grounds for this practice), to select the successful students by ballot?

Yours, etc.,

E. S. MEYERS,
Dean, Faculty of Medicine.

University of Queensland Medical School,
Brisbane,
March 11, 1954.

ANTICOAGULANTS AND CEREBRAL THROMBOSIS.

SIR: There appears to be a difference of opinion as to the use of anticoagulants in cerebral thrombosis. May I suggest the following technique, which I have found useful in three hemiplegias with near or complete paralysis? If the patient is conscious, break an ampoule of amyl nitrite under the nose. If this is followed by an improvement in the voluntary movements of the affected side, anticoagulant treatment should be commenced forthwith using heparin and "Dindevan". The improvement may be dramatic; in my cases, complete recovery in one and 70% recovery in two, in less than fourteen days.

The improvement with amyl nitrite is transient, lasting only a few minutes, due apparently to relief of cerebral arterial spasm, but if this improvement does occur it means that cerebral damage is slight and that anticoagulants are not contraindicated. Two of my cases were seen within three or four hours of the catastrophe, but in the third it was over twenty-four hours afterwards.

Yours, etc.,

A. T. H. JOLLY.

257 York Road,
Midland Junction,
Western Australia.
March 12, 1954.

RECENT EXPERIENCES IN THORACIC SURGERY IN NEW SOUTH WALES.

SIR: After re-reading Mr. Monk's disinterested paper and the supporting letters of Messrs. D. Miller, J. O. Brown, H. Windsor and Dr. J. McCulloch, I wondered what these scullions of the thoracic kitchen were complaining about. Their betters in the banqueting Hall of Medicine have already assured us that the sacred honorary system, so hallowed by tradition and back-slapping, must be preserved at all costs. Why can't these moaners accept this? They advance the argument that they and their families must live. But must they? Even if this be granted, why should they expect a standard of living nearly as high as that of an unskilled labourer? Before long they will want to emulate their own plumber. The truth is, of course, that these men practise thoracic surgery and anæsthesia (in small type, please) of their own free will. They should rest content that, for their slight services, they receive a remuneration

which many an office boy or girl messenger would not lightly refuse. But we must not be surprised if these thoracic fellows do not at first accept that station in life to which the bureaucrat has been pleased to call them. Perhaps they will continue to complain and even to go on pressing for redress like any other wage plug. They may even welcome compulsory unionism in the hope that some union will admit them and take up their case. But what I most fear from these ungrateful devils is that by word and example they may persuade keen young men from following in their stumbling footsteps so that in twenty years or so there will be no thoracic surgeons and anæsthetists to exploit. By then, according to the "Reader's Digest", pulmonary tuberculosis will have been conquered, so why worry?

Yours, etc.,

185 Macquarie Street, Sydney,
Undated.

M. P. SUSMAN.

CORNEAL ULCER.

SIR: In a final reply to my two gallant opponents, F. W. Simpson and James Hart, it would appear that I am hemmed in by a "pincer" action from Brisbane to Perth.

Dr. Hart's jet-propelled frontal attack and Dr. Simpson's gentler but none the less efficient enfilading movement, coupled with the ominous silence of any guns on my side, compel me to capitulate. So I will agree: Atropine not to be used by the general practitioner.

The sound foundation of my article remains: an ulcer must be cleansed, rested and protected, if it is to heal. The details I leave to Dr. Simpson and Dr. Hart.

It must be realized that "Special Articles for the Clinician" are difficult to compile, for you have to try and strike a balance between trite generalities and specialized techniques, but in the last analysis it is the cure of the patient's lesion that really matters.

After all, sir, my article was about the treatment of corneal ulcers.

Yours, etc.,

135 Macquarie Street, Sydney,
March 10, 1954.

ARTHUR D'OMBRAIN.

SIR:

He's deft and wise. In the care of eyes
D'Ombrain knows no master.
"With bad C.U.'s", he says, "You use
Atropine and plaster."

Equally wise, Hart won't advise
This mydriatic splash.
He won't be seen with atropine.
"Its overuse is rash."

Less topical, in regions tropical
We advise G.P.'s with care.
It's much the best to use aqua dest.,
Pink eyeshields and hot air.

Yours, etc.,

52 Abbott Street, Cairns,
North Queensland.
March 14, 1954.

JOHN KENNEDY.

THE TENTH RHEUMATISM REVIEW.

SIR: May we offer you our appreciation of the wise and timely remarks which were made in the editorial column of THE MEDICAL JOURNAL OF AUSTRALIA on March 13, 1954. Discussing the Tenth Rheumatism Review of the American Heart Association, you said: "Would that there was as much concern about the prevention of rheumatic fever or about research into it as there is in regard to poliomyelitis." You also mentioned our ignorance of the incidence of rheumatic disease in this country.

We are happy to say that at the request of this Institute, acute rheumatism and Sydenham's chorea have recently been declared notifiable in all States of the Commonwealth except in Tasmania and in South Australia. Despite diagnostic and other difficulties, we feel that such notification must add to our knowledge of this group of diseases.

Rheumatic fever has been chosen by this Institute as the subject of a special study. This study has now been in progress for about two years, and we are more than ever convinced of the importance of the problem.

Yours, etc.,

LORIMER DODS.
BRYAN DOWD.

The Institute of Child Health,
The University of Sydney,
March 17, 1954.

BRONCHIECTASIS WITH NORMAL PLAIN X-RAY APPEARANCES.

SIR: I have read with interest the article by Mr. H. B. Harwood (M. J. AUSTRALIA, March 13, 1954), and while I agree with the general contention that the radiologist is frequently unable to make a diagnosis of bronchiectasis on the plain film, the problem of reaching a correct diagnosis is not nearly so difficult if the patient's chest is examined and without recourse to other ancillary aids. I suggest that the patient should always be examined *secundum artem* and at least as thoroughly as his shadow.

Yours, etc.,

183 Macquarie Street, Sydney,
March 18, 1954.

H. MAYNARD RENNIE.

SIR: I have read with interest Dr. H. B. Harwood's report upon 25 cases of "Bronchiectasis with Normal Plain X-Ray Appearances" (M. J. AUSTRALIA, March 13, 1954, page 397).

A radiographic examination is but a link in the chain of clinical evidence—with the accent on the word "clinical"—and a plain radiograph is an incomplete examination if nothing is revealed by it to support the clinical evidence of the case. After all, a radiograph is not a photograph. It is merely the shadow projection upon a film of the varying degrees of density of the body tissues, and if there is insufficient mucus surrounded by air at the time of examination, no "suggestive shadow" will be cast upon the film.

If the X-ray film was, in reality, a photograph, how easy our work would become. Unfortunately, this misconception is held by many medical practitioners, for we see in the March 6, 1954, issue of THE MEDICAL JOURNAL OF AUSTRALIA, page 350, the following statement by H. W. Wunderly: "However, as a nation-wide survey had never been made, it was decided to attempt to take an X-ray photograph of the chests . . ." *et cetera*.

Yours, etc.,

147 Macquarie Street, Sydney,
March 17, 1954.

D. G. MAITLAND.

SIR: Dr. H. B. Harwood's report of 25 cases of "bronchiectasis with normal plain X-ray appearances" in your issue of March 13 merits comment. From it the uninitiated reader might infer (*a*) that many practitioners have either forgotten or never heard about this common disease, (*b*) that radiological technique and interpretation are at a low ebb, at least in the areas from which his cases have been drawn. In most of them—but not all—the history was characteristic, but it is a matter of common experience that a surprising number of patients, and parents, tolerate such symptoms without seeking medical advice for many years.

It is the radiological aspect, however, that occasions most concern. Wynn Williams (1953) recently drew attention to the frequency with which minor changes, such as small

segmental shadows, and crowding and broadening of pulmonary markings, are missed on plain rays of the bronchiectatic chest. His article should be read by all radiologists and clinicians interested in this malady. Less excusable appear to be reports of "normal" in cases such as "atelectasis of the lower lobe of the left lung", "advanced bronchiectasis at the left cardio-phrenic angle", "saccular and cylindrical bronchiectasis of the right cardio-phrenic angle", which are scattered through the series. Were the films technically so bad, or were the radiologists so unobservant?

If bronchograms are to be obtained in any case, let us make sure the job is properly done. This means a minimum of three films. Apart from the antero-posterior exposures with which Dr. Harwood illustrates his article, it is essential to obtain at least two other views, preferably a right lateral and a left oblique. The bronchographic descriptions he gives are hardly in line with modern concepts, though this criticism is perhaps not germane to his chief argument.

Finally, at the risk of being provocative, I would assert that in the diagnosis of bronchiectasis, the bronchoscopist is not indispensable, and that the best bronchograms on the average are those carried out by a skilled radiologist who knows his bronchial anatomy and who will devote time and patience to his technique.

Yours, etc.,

137 Macquarie Street,
Sydney,
March 23, 1954.

COTTER HARVEY.

Reference.

WYNN WILLIAMS, N. (1953), "Observations on the Radiological Appearances of Undiagnosed Bronchiectasis", *Tubercle*, 34: 212.

Obituary.

JAMES GERALD ROY FELSTEAD.

WE are indebted to Dr. Gordon Forsyth for the following appreciation of the late Dr. James Gerald Roy Felstead.

Roy Felstead was born at Christchurch in New Zealand on the fifth day of February, 1887, and came to Melbourne with his parents and their family at an early age. He received his early education at Saint Paul's Cathedral School, and later at Wesley College, Melbourne. Matriculating in 1904, he commenced his medical course at the University of Melbourne as a student at Queen's College.

He graduated M.B., Ch.B. with honours in 1909 and became a resident medical officer at the Melbourne Hospital in 1910 and a resident medical officer at the Women's Hospital, Melbourne, in 1911. The degree of doctor of medicine was conferred on him in 1912, after which he became assistant to Dr. T. J. Ryan, in Nhill, in western Victoria. Succeeding to the practice of the late Dr. Bryan Foster, at Horsham, in 1914, he continued to practise there for almost forty years as a physician and surgeon until a short time before his death in Melbourne on January 26, 1954.

He was admitted to Fellowship of the Royal Australasian College of Surgeons in 1929. His work as a country surgeon was outstanding, particularly in hydatid disease, in which he had a very wide experience. Clinical material for hydatid surgery was unfortunately only too common in the western part of Victoria in the early days of Felstead's practice. He was appointed honorary surgeon to the Horsham Hospital (later to become the Wimmera Base Hospital) in 1926 and became honorary consulting surgeon and Life Governor to that institution in 1951.

In addition to the absorbing interest in medicine and surgery he seemed to find time for the cultural side of life. His hobbies were many and varied. Music, philately, navigation, heraldry and hand-loom weaving were some of the interests in which he could completely relax. He also possessed a very fine collection of geological specimens and rock sections, many gathered meticulously on his vacations, and rock sections cut and mounted in his own workshop. Medicine and accountancy rarely go hand in hand, but a glimpse at his books of account would be sufficient to show that it is possible to combine method, accountancy and medicine.

The age has gone which produced the man who could claim the whole realm of medicine and surgery as his domain. Roy Felstead was such a man, and the gap cannot be filled in these days by any one individual.

Sir Victor Hurley writes: By the recent death of Dr. Roy Felstead, of Horsham, the medical profession in Victoria has lost one of its most outstanding personalities. For many years his name was almost a household word over the north-western and western part of the State. In deciding to devote himself to general practice he was determined that this should be of the highest possible quality. The facilities then available in the country, and the standards of hospitals generally, left much to be desired; many difficulties were encountered, but were successfully overcome by his enthusiasm, energy and ability.

Felstead kept himself abreast of new developments in medicine and surgery. He read widely and regularly attended clinics and hospitals in the larger centres. He took an active part in post-graduate lectures and demonstrations, as well as in the meetings of the Royal Australasian College of Surgeons. As his practice increased he devoted more of his time to surgery. He was an outstanding all-round general surgeon—an intrepid yet safe and skilful operator, with sound judgement and an impeccable technique. His activities also ranged over a wide field in gynæcology, ear, nose and throat practice and ophthalmology. Realizing that

such a wide range of activities could not be continued single-handed, he decided to build a clinic in Horsham in which facilities would be provided to keep pace with the continuing advances in medicine and surgery. The building was most carefully planned and liberally equipped, and is a model of what such a clinic should be. Each of the doctors has been provided with commodious up-to-date consulting rooms, as well as examination and waiting rooms. The clinic also is equipped with an X-ray department, a biochemical laboratory, an eye clinic, a theatre for minor operations, and a library well stocked with works of reference and the latest periodicals, as well as a room for regular meetings of the members of the clinic, where their problems and interesting cases were discussed. Felstead was the head and guiding spirit of the clinic. By reason of his personality, sound judgement, sincerity and scrupulous integrity the work of the clinic proceeded smoothly and rendered a high standard of medical service. For many years he was surgeon to the Horsham Hospital. The hospital was rebuilt some years ago and named the Wimmera Base Hospital, and he continued to render service to it almost up to the time of his death.

Apart from his wide professional activities he took a keen interest in many other subjects; music was one of them. He had been a choir boy at Saint Paul's Cathedral, Melbourne, and for the rest of his life had a keen appreciation and a wide knowledge of music. He is survived by a widow and two children. His only son, Dr. J. B. Felstead, is in practice at Ulverstone, Tasmania, and his only daughter married Dr. T. V. Walpole, who is a member of the clinic at Horsham.

Naval, Military and Air Force.

APPOINTMENTS.

The undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Numbers 13 and 17, of February 25 and March 11, 1954.

Naval Forces of the Commonwealth.

Permanent Naval Forces of the Commonwealth (Sea-Going Forces).

Appointment.—Michael Francis Cleary is appointed Surgeon Lieutenant (for Short Service) (on probation), dated 2nd January, 1954.

Promotion.—Surgeon Lieutenant (for Short Service) Michael Joseph Lydon is promoted to the rank of Surgeon Lieutenant-Commander (for Short Service), dated 26th January, 1954.

Fixing Rates of Pay.—Surgeon Lieutenant-Commander (for Short Service) John Arthur Basil Cotsell is paid the rates of pay and allowances prescribed for Surgeon Commander whilst acting in that rank, dated 6th January, 1954.

Citizen Naval Forces of the Commonwealth.

Royal Australian Naval Reserve.

Appointments.—Alastair Charles Cole (Surgeon Lieutenant, Royal Australian Naval Volunteer Reserve) is appointed Surgeon Lieutenant, with seniority in rank of 21st August, 1953, dated 4th January, 1954. Edward Durham Smith, Donald Metcalf and John Coleman are appointed Surgeon Lieutenants, dated 23rd December, 1953, 30th December, 1953, and 6th January, 1954, respectively. Miles Sterling-Levis is appointed Surgeon Lieutenant-Commander, dated 6th January, 1954. Geoffrey David Davis is appointed Surgeon Lieutenant, with seniority in rank of 1st October, 1953, dated 12th January, 1954. John Battson McCouat is appointed Surgeon Lieutenant, with seniority in rank of 23rd November, 1953, dated 6th January, 1954.

Promotion.—Surgeon Lieutenant Aretas William Overton Young is promoted to the rank of Surgeon Lieutenant-Commander, dated 21st December, 1953.

Australian Military Forces.

Australian Regular Army.

Royal Australian Army Medical Corps.

The Short Service Commission granted to 3/40099 Captain (Temporary Major) J. M. Bradley is extended for a period of two years from 10th April, 1953.

2/40151 Captain R. J. Burns is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (2nd Military District), 23rd January, 1954.

Citizen Military Forces.

Eastern Command: Second Military District.

Royal Australian Army Medical Corps (Medical).—The provisional rank of 2/135769 Captain D. W. Lawson is confirmed. 2/61552 Captain (provisionally) R. H. Keatinge relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (2nd Military District) in the honorary rank of Captain, 1st January, 1954. to be Captain (provisionally), 26th January, 1954: 2/56843 Alan Hugh Gibson.

Southern Command: Third Military District.

Royal Australian Army Medical Corps (Medical).—3/101828 Honorary Captain H. A. Jenkins is appointed from the Reserve of Officers, and to be Captain (provisionally), 17th November, 1953. To be Captain (provisionally), 14th January, 1954: 3/101025 George William Westlake.

Western Command: Fifth Military District.

Royal Australian Army Medical Corps (Medical).—5/21508 Captain M. G. F. Donnan relinquishes the temporary rank of Major and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (5th Military District) in the honorary rank of Major, 1st January, 1954, 5/32256 Captain (provisionally) T. P. Banting relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District) in the honorary rank of Captain, 18th December, 1953.

Reserve Citizen Military Forces.

Royal Australian Army Medical Corps.

1st Military District.—To be Honorary Captains: George Peter Brooks, 2nd January, 1954, Leonard Samuel Marriott, 4th January, 1954, Nicholas John Nicolaides, 26th January, 1954, and Darrell Murray McKay and David Powell Thomas, 29th January, 1954.

Royal Australian Air Force.

Permanent Air Force: Medical Branch.

The resignation of the following Flight Lieutenants is accepted: G. U. Taylor (036124), 4th January, 1954, D. C. Galbraith (025651), 5th January, 1954.

Post-Graduate Work.

THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

Week-End Course at Wagga Wagga.

The Post-Graduate Committee in Medicine in the University of Sydney announces that a week-end course will be held at the Wagga Wagga Base Hospital, in conjunction with the Southern Districts Medical Association, on Saturday and Sunday, May 15 and 16, 1954. The following programme has been arranged: Saturday, May 15: 2 p.m., registration; 2.30 p.m., "Injuries to the Hand", Dr. D. Officer-Brown; 4 p.m., "Modern Treatment of Hypertension", Dr. R. B. Blacket. Sunday, May 16: 10 a.m., "Urological Emergencies", Dr. J. W. S. Laidley; 11.30 a.m., "Repairs to Tendons and Nerves, Skin-Grafting Technique", Dr. D. Officer-Brown; 2 p.m., "Thrombosis and Use of Anticoagulants", Dr. R. B. Blacket; 3.30 p.m., "Urinary Calculus", Dr. J. W. S. Laidley.

The fee for attendance is £3 3s. Those wishing to attend are requested to notify Dr. John Oliver, Honorary Secretary, Southern Districts Medical Association, 69 Baylis Street, Wagga Wagga (telephone 2568), as soon as possible.

Royal Australasian College of Surgeons.

PRIMARY EXAMINATION FOR THE F.R.A.C.S.

A primary examination in anatomy (including normal histology) and applied physiology and the principles of pathology will be conducted in Melbourne in September, 1954. The written papers will begin on Thursday, September 9, 1954.

The examination is reciprocal with the primary examination for Fellowship of the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Royal College of Surgeons in Ireland and the Royal Faculty of Physicians and Surgeons of Glasgow.

Each candidate will be notified by post of the result at the termination of the examination.

The examination is open to graduates of not less than one year's standing of a medical school approved by the Council of the College for the purpose. Candidates must submit evidence of their qualification and of the date of acquirement thereof.

Forms of application for admission to the examination may be obtained from the Secretary, Royal Australasian

College of Surgeons, Spring Street, Melbourne. The fee for admission, or readmission, to the examination is £15 15s. Australian currency (*plus* exchange on cheques drawn on banks outside Melbourne). The fee must be forwarded with the form of application so as to reach the Secretary at his office not later than July 29, 1954.

Notice.

AN APPEAL FROM INDIA.

AN appeal has been issued from the Christian Medical College of Vellore, South India, for an experienced anæsthetist, man or woman, preferably with a diploma in anæsthesia, and with experience in thoracic and neurosurgery. The minimum period of service should be at least two years, preferably five. At present the one anæsthetist has charge of three operating theatres and also superintends the teaching of students. Vellore College is controlled by missionary societies of many denominations and it has a hospital of five hundred beds. The medical staff numbers nearly one hundred. Some of these are Indians gaining experience, but the European members of the staff are well qualified and highly trained. Further information may be obtained from the Reverend Clive Kerle, 93 Bathurst Street, Sydney.

THE AUSTRALASIAN ASSOCIATION OF PSYCHIATRISTS.

THE Australasian Association of Psychiatrists will hold a scientific meeting in Melbourne on April 28, 1954. All members of the British Medical Association are invited to attend. The programme will be as follows: 11 a.m., demonstration of cases; 11.30 a.m., "Maternal Deprivation and its Equivalents", Dr. J. V. Ashburner; 2 p.m., demonstration of cases; 2.30 p.m., "Should I Admit Mongoloid Children, a Legal and Social Dilemma", Dr. J. V. Ashburner; 2.40 p.m., "Mongoloid Patients in Kew", Dr. Elizabeth Wann; 8 p.m., "The Clinical Diagnosis of Early Schizophrenia", Dr. Frank Graham (discussion to be opened by Dr. A. J. M. Sinclair).

The daytime meeting will be held at the Special School of the Kew Mental Hospital, Children's Cottages. Lunch will be provided for those who notify the Honorary Secretary of the Association one week in advance. The evening meeting will be held at the Royal Melbourne Hospital.

Further information may be obtained from the Honorary Secretary of the Australasian Association of Psychiatrists, Dr. Ian Martin, 34 Erin Street, Richmond, Victoria (telephone: JA 5291).

THE SERVICES MEDICAL OFFICERS ASSOCIATION OF NEW SOUTH WALES.

A SPECIAL GENERAL MEETING of the members of the Services Medical Officers Association of New South Wales will be held at the University Club, Phillip Street, Sydney, on Friday, April 23, 1954, at 5.30 o'clock p.m., for the purpose of considering and, if thought fit, of passing a resolution that the Association be wound up.

If the above resolution is passed by the requisite two-thirds majority a further motion will be submitted to the meeting as follows:

> That if upon the winding up or dissolution of the Association there remain any assets of the Association after satisfaction of all its debts and liabilities the same shall be paid and transferred to the Sydney Legacy, or some other charitable institute agreed upon.

Should the motion that the Association be wound up be passed by the requisite two-thirds majority, notice is hereby given that a second special general meeting of the members of the Services Medical Officers Association of New South Wales will be held at the University Club on Friday, April 23, 1954, at 6.30 p.m. for confirmation of the resolution to wind up the Association.

DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED MARCH 13, 1954.[1]

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism	1(1)	5(4)	..	..	1(1)	..	..	..	7
Amœbiasis	..	..	..	..	..	..	..	..	..
Ancylostomiasis	..	..	..	..	..	..	..	..	..
Anthrax	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..
Brucellosis	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus)	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..
Diarrhœa (Infantile)	3(2)	10(5)	12(12)	..	..	..	2	..	27
Diphtheria	7(6)	3(2)	1(1)	..	..	..	..	..	11
Dysentery (Bacillary)	..	5(5)	2	..	4(4)	..	..	..	11
Encephalitis	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice	..	..	..	..	..	..	..	..	..
Hydatid	..	1(1)	..	..	7(7)	1	..	..	9
Infective Hepatitis	1(1)	11(4)	..	..	..	..	..	..	12
Lead Poisoning	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	..	..	..
Leptospirosis	..	..	..	..	..	..	..	..	..
Malaria	..	..	..	..	..	..	..	..	..
Meningococcal Infection	2(1)	2(1)	1	1	2	..	..	..	8
Ophthalmia	..	..	..	..	4	..	..	..	4
Ornithosis	..	1(1)	..	..	..	..	..	..	..
Paratyphoid	..	..	..	..	..	..	..	..	1
Plague	..	..	..	..	..	..	..	..	..
Poliomyelitis	40(9)	34(13)	6	7(6)	46(35)	..	..	5	138
Puerperal Fever	..	..	3	..	..	..	..	..	3
Rubella	..	12(12)	..	..	10(5)	..	..	..	22
Salmonella Infection	..	..	..	..	3(3)	..	..	..	3
Scarlet Fever	11(6)	34(20)	5(2)	1(1)	..	1(1)	..	..	52
Smallpox	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	..	..
Trachoma	..	..	..	..	..	..	..	..	..
Trichinosis	..	..	..	..	..	..	..	..	..
Tuberculosis	51(41)	9(3)	7(3)	5(3)	9(4)	3(2)	1	..	85
Typhoid Fever	..	2(1)	..	..	1(1)	..	..	..	3
Typhus (Flea-, Mite- and Tick-borne)	..	..	..	..	..	..	..	..	..
Typhus (Louse-borne)	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..

[1] Figures in parentheses are those for the metropolitan area.

A quorum of twenty members must be present at these meetings, and as there are at present no financial members, medical officers who served in either war are invited to telephone Dr. C. V. Salisbury, the honorary treasurer, and notify him that they wish to join or rejoin the Association (annual subscription 5s.) in order that the necessary quorum will be present at these meetings.

Research.

NUFFIELD FOUNDATION DOMINION TRAVELLING FELLOWSHIPS.

NUFFIELD FOUNDATION DOMINION TRAVELLING FELLOWSHIPS have been awarded to Dr. E. S. Finckh and Dr. W. B. Macdonald, both of Melbourne. Dr. Finckh is at present pathologist at the Clinical Research Unit of the Walter and Eliza Hall Institute of Medical Research. Dr. Macdonald is at present clinical research associate at the Children's Hospital, Melbourne, and clinical demonstrator in pædiatric medicine at the University of Melbourne.

Public Health.

NOTIFIABLE DISEASES IN QUEENSLAND.

IT has been announced in the *Queensland Government Gazette*, Number 54, of March 13, 1954, that, in pursuance of the provisions of *The Health Acts*, 1937 to 1949, acute rheumatism (including rheumatic fever and chorea) has been declared a notifiable disease under the said Acts with respect to the whole of the State of Queensland.

Congresses.

INTERNATIONAL CONGRESS ON DISEASES OF THE CHEST.

THE third International Congress on Diseases of the Chest of the American College of Chest Physicians will be held in Barcelona, Spain, on October 4 to 8, 1954. Further information may be obtained from the general secretary of the congress, Dr. A. Caralps, Córcega, 393, 4.°, 1.ª Barcelona, Spain.

INTERNATIONAL CONGRESS OF CATHOLIC DOCTORS.

THE sixth International Congress of Catholic Doctors will be held in Dublin, Ireland, from June 30 to July 4, 1954. The theme will be "Demography and Medical Practice". Further information may be obtained from the Secretary-General, Dr. P. C. Jennings, Veritas House, 7 Lower Abbey Street, Dublin.

Medical Appointments.

Dr. D. P. Dineen has been appointed anæsthetics registrar to the Royal Adelaide Hospital.

Dr. K. G. Watson has been appointed gynæcological registrar to the Royal Adelaide Hospital.

Dr. N. E. Parker has been appointed medical officer to the Mental Hospital, Toowoomba, and medical officer to the Brisbane Mental Hospital, Goodna, Queensland.

The following appointments have been made to the medical staff of the Royal Alexandra Hospital for Children, Camperdown, New South Wales: Dr. H. J. Ham, honorary consultant in radiotherapy; Dr. A. Grant and Dr. J. P. Ryan, honorary assistant radiologists; Dr. R. E. Wherrett, honorary orthopædic surgeon; Dr. C. M. Maxwell and Dr. J. M. Furber, honorary assistant orthopædic surgeons; Dr. A. Distin Morgan, visiting anæsthetist; Dr. Marie E. Hill, Dr. C. A. Sara, Dr. J. Una Blacker and Dr. C. M. Davidson, visiting assistant anæsthetists.

Deaths.

THE following deaths have been announced:

BINNS.—John Clyde Binns, on March 25, 1954, at Sydney.

MAXWELL.—Charles Maxwell, on March 24, 1954, at Geelong, Victoria.

Diary for the Month.

APRIL 13.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

APRIL 20.—New South Wales Branch, B.M.A.: Medical Politics Committee.

APRIL 21.—Western Australian Branch, B.M.A.: General Meeting.

Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.
side Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178 North Terrace, Adelaide): All Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

Tasmania: Part-time specialist appointments for the north-west coast of Tasmania.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

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